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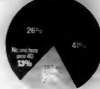
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How would you rate your organization's environment for older IT workers?



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SECURITY: Peter Mudge Zattoo of Intrusix Inc. offers four steps for keeping your systems safe from outside adversaries. **QuickLink 49043**

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COMPUTERWORLD INNOVATION TECHNOLOGY AWARDS 2004

This year's 30 award-winning technologies realized their potential in the hands of customers. The winners' list begins on page 32. Plus, read how IT users are getting payoffs from select technologies on the following pages.

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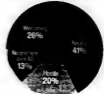
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AT DEADLINE

EDS Expects to Cut Up to 20,000 Jobs

Electronic Data Systems Corp. expects to lay off 15,000 to 20,000 employees over the next two years as part of an effort to slash its annual costs by \$3 billion, Chairman and CEO Michael Jordan said during a question-and-answer session at a conference in New York. The new reductions would be in addition to the 5,000 jobs that EDS has cut since June 2003, Jordan added.

However, an EDS spokesman said afterward that the projected number of job cuts cited by Jordan was an estimate, not a firm target. The actual number of layoffs will depend on the progress of the Plano, Texas-based IT services firm's ongoing business transformation effort, according to the spokesman.

Privacy Group Sues Supermarket Chain

The Privacy Rights Clearinghouse, a San Diego-based advocacy group, said it has filed a privacy-related lawsuit against supermarket chain Albertson's Inc. and its SunOn, Once and Jewel-Osco pharmacy units. The lawsuit, filed in San Diego County Superior Court, claims that Albertson's illegally used the personal data of pharmacy customers to conduct targeted marketing campaigns on behalf of large drug companies. Boise, Idaho-based Albertson's called the allegations "false and totally without merit."

Short Takes

THE EUROPEAN COMMISSION approved Hewlett-Packard Co.'s plan to buy Syntex PLC, a British, England-based IT services firm. The deal won't significantly increase HP's share of the IT market in Europe, the commission said. . . . HYPERION SOLUTIONS CORP. in Sunnyvale, Calif., this week plans to launch an upgrade of its Esbase online analytical processing software featuring a faster data analysis engine.

Florida IT Managers Balance Tech Needs, Workforce Issues in Storms

Flexibility key in operational, staffing strategies

BY THOMAS HOFFMAN

MIAMI-DADE County's IT operations center serves the largest metropolitan area in the state of Florida and is staffed around the clock. Not surprisingly, its managers have had to come up with innovative ways to balance the county's IT requirements with the needs of the center's workers—especially when natural disasters such as hurricanes occur.

Labor Day weekend, when Hurricane Frances struck the state, was a prime example. In order to continue supporting vital IT services such as the county's VAX-based 901 system and its police and fire radio network during the storm, the operations center's 650-person staff split into two groups working 12-hour shifts. And to keep IT workers close to their loved ones during the hurricane, families were encouraged to camp out in the Miami data center, said Ruben Lopez, the county's chief technology officer.

"We try to be as accommodating as possible so people can be with their families, especially during the lockdown situation," said CIO Judi Zito, referring to the IT department's practice of not allowing anyone to enter or leave the data center during emergencies. "I wouldn't want to be here during a lockdown if my elderly parents were staying at my house," she added. "I'd want to be with them."

"Juggling Act"

Zito's flexible approach to balancing operational and staff needs during a disaster reflects the kind of strategies that many IT executives have developed during their tenures in the Sunshine State, which has been hit by two hurricanes in the past month and last week was bracing for a third — Hurricane Ivan—that could arrive early this week.

Staffing during hurricanes "is certainly a juggling act," said David Gawaluck, CIO at Lakeland Regional Medical Center in Lakeland, Fla. To help support critical medical systems during the height of Frances, the medical center had eight volunteers from its 65-person IT department stay



was the second hurricane to hit Florida in less than a month

at the 851-bed facility. "Fortunately, we have lots of beds here," Gawaluck said wryly, adding that other IT staffers stayed at home so they would be fresh when needed.

"We worry about our people, because you need them to come back into work and they need to deal with their families and homes," said Lew Temares, CIO at the University of Miami. The university kept 10 IT staffers at its central campus in Coral Gables over Labor Day weekend to monitor servers and communications systems during the storm, Temares said.

The school, which ranked second on Computerworld's 2004 Best Places to Work in

IT list, has a tight-knit staff of about 300 IT workers. One staffer drove to the home of a colleague who didn't have water to deliver ice, according to Temares. Other workers who were in need of help received food and other supplies from a crisis management team that the IT department has set up.

Racardi U.S.A. Inc., the U.S. importing, marketing and sales arm for wine and spirits producer Baccardi Ltd., took a different tack. It shut down its Miami and Jacksonville data centers on Sept. 2 and transferred data processing activities to an IT facility in Puerto Rico for five days, said Doug Watson, director of IT for the Americas. ☐ 48356

IT Shops Prepare for Worst, Suffer Minimal Disruptions

Hurricane Frances dumped nearly 15 inches of rain on some parts of Florida. But IT managers interviewed last week said their data centers were spared major damage and many suffered power disruptions that led them to rely on diesel generators to keep systems running.

"We're still paddling faster than the waters are rising," said David Gawaluck, CIO at Lakeland Regional Medical Center. Soaking rains knocked out power to one of the hospital's nursing units on Sept. 5, forcing the IT team to

run the unit's PCs and other equipment on generator power for four hours, Gawaluck said.

He added that two days before Frances arrived, the hospital sent a set of backup storage tapes to an Iron Mountain Inc. data center in Philadelphia as a precaution. As it turned out, Lakeland Regional's data center had electricity throughout the storm.

At Lockheed Martin Enterprise Information Systems, help desk calls that are normally split between facilities in Orlando and Denver were all routed to Denver

over the Labor Day weekend, said Elaine Hirseshel, director of communications.

Company officials also decided to take three e-mail servers that support 7,000-plus Orlando-area workers off-line before Frances hit, Hirseshel said. In addition, they took down nine application servers across the state, including one in Lakeland that supports a significant amount of payroll and finance processing. Fortunately, Lockheed Martin's Orlando data center didn't suffer any physical damage, she said.

The University of Miami didn't suffer any IT disruptions, but CIO Lew Temares said he and his staff learned a valuable lesson.

The university runs a server-based system from Diebold Inc. that lets students use combined identification and debit cards to pay for meals and gain access to various buildings. "We locked out because our central generator didn't go down," Temares said. "But if it had, we could've lost access to the system for 16 hours." The IT team now plans to use servers located off-campus to back up the system.

—Thomas Hoffman

Under Pressure, ISP Savvis Agrees To Boot Spammers Off Its Networks

BY ANJUNAMU MAJANAN

Antispam campaigners scored a notable victory last week when they helped peer Internet service provider Savvis Communications Inc. to agree to pull the plug on 40 customers who were using its networks to send out e-mail spam.

St. Louis-based Savvis also announced that it will work with The Spamhaus Project, a London-based antispam group, to identify and discontinue other clients who engage in spamming activities.

Spamhaus CEO Steve Linford said the moves are a step in the right direction for Savvis, which has customers in more than 40 countries and claims 75 of the top 100 banks worldwide among its client base. Over the past few months, Savvis had emerged as one of the world's largest hosts of spam operators, according to Linford.

But the companies being given the boot represent only a portion of the ISP spammers that Spamhaus has identified as being hosted by the service provider, Linford added. "The 40 that Savvis is getting rid of are only the real hard-core elements of the spammer community that no other network will touch," he said.

Savvis CEO Bob McCormick said the timing of the company's announcement wasn't driven by pressure from Spamhaus and other antispam groups alone. Savvis has always had strong spam-related policies, McCormick said, adding that many of the recent problems involved customers the company inherited when it acquired Cable & Wireless PLC's U.S. Web hosting operations in January.

"We bought a new company, and we were focused on cutting costs and getting it back to profitability," McCormick said. It has taken time for Savvis to figure out which of the new customers didn't meet its acceptable-use policy,

he noted. But now the company will enforce its standard policies with the former Cable & Wireless customer base, McCormick said.

Outside Influence

Savvis' pledge to rid its networks of spammers is an indication of the pressure that antispam groups can put on companies, said Peter Christy, an analyst at NetEdge Research Group in Los Altos, Calif.

Several antispam groups, including Spamhaus and the anonymously run Spam Prevention Early Warning System (SPEWS), had begun blacklisting entire blocks of IP ad-

dresses owned by Savvis. Adding to the pressure was the fact that groups such as SPEWS were "overblocking" Savvis' IP addresses, which results in even nonspammers finding themselves on antispam blacklists.

Several internal memos posted on a whistle-blower Web site by a former Savvis employee suggested that the company may have succumbed to such pressure. In one internal memo, a Savvis executive likened SPEWS to a "vigilante organization with a diffuse international existence." In another, a Savvis executive cautioned about the

business problems that such extensive blacklisting can cause and questioned Savvis' ability to continue selling its services to major users. McCormick didn't dispute the authenticity of the memos.

Real-time blacklists, many of which are freely available, are widely used by companies to block e-mail from known spammers. For instance, Spamhaus claims that its blacklists are used by an estimated 200 million Internet users.

Christy said that although many antispam groups have high standards when it comes to blacklisting, others are run by "overenthusiastic" volunteers who sometimes "make judgments that may or may not be a reasonable view" of a company's e-mail activities. **Q 49393**

Groups That Run Real-Time Blacklists

THE SPAMHAUS PROJECT:

Maintains a database called the Register of Known Spam Operations, which collects information and evidence about individual spammers and so-called spam gangs.

MAIL ABUSE PREVENTION SYSTEM:

Runs the MAPS Relay Spam Shooter database, which lists the IP addresses of spammers who receive open-relay mail service.

OPEN RELAY DATABASE:

Oversees a database of IP addresses that are known or considered likely to be used to send unsolicited e-mail.

Dell Seeks to Improve Services Through Support Hubs

New China facility opens; more due in Asia and Europe

BY JUAN CARLOS PEREZ

Dell Inc. is pushing ahead with plans to open a series of IT support hubs worldwide in an effort to improve its ability to serve customers, especially corporate users.

Last week, Dell opened a support facility that it calls an enterprise command center (ECC) in Xiamen, China, to serve users in that country. That facility is the hardware vendor's second ECC, joining one set up last November in Round Rock, Texas, to support customers in the U.S., Canada and Latin America.

Dell said that this year, it plans to open an ECC in Limerick, Ireland, for its European customers, as well as a facility in Japan. It added that it expects to cut the ribbon on another ECC in the Asia-Pacific region early next year.

"The goal here is to have consistent enterprise support in all regions of the world," said Jan Ulrich, vice president of enterprise services at Dell. Although each ECC will sup-

port only the country or area in which it's located, the centers will be linked in order to give Dell broad visibility into all service incidents involving customers that have global operations, Ulrich said.

Regional Focus Works

Locating customer service hubs in specific countries and regions is a good move for Dell and should benefit its user base, said Patrick Sayers, an analyst at Technology Business Research Inc. in Hampton, N.H. "You get the client intimacy, because [ECC staffers] don't have to struggle

to overcome the customs and culture," Sayers said.

Dell is known as an innovator in making its business processes more efficient, so it's not surprising to see the company aggressively moving to improve the way it provides services, Sayers added, noting that services is a growing business for Dell. "What they're doing is translating the success they've had on the hardware side managing their supply chain and transferring those techniques to the services side," he said.

The ECCs are staffed around the clock and act as central

repositories of customer service information for their geographical areas, Ulrich said. Dell plans to use the ECCs to continuously monitor, track and manage service jobs from beginning to end, she added.

For example, when a service call comes into a technical support center in the Americas, the case is logged into systems at the Round Rock ECC and tracked from there until it's resolved. The facility in Texas has helped Dell significantly improve the speed with which services are delivered to users, Ulrich said.

"In the Round Rock ECC, you can see on maps where all our [service] events are in the Americas, what their status is, which field technicians are on-site, which parts are available to a particular customer and so on," she said. Ulrich noted that prior to the facility's opening, Dell had services delivery processes, "but the people were in different organizations, buildings and groups, and the process wasn't as tightly integrated."

Q 49393

Perez writes for the IDG News Service.



Self support centers are opening in other countries.

BRIEFS

Lexmark Recalls Laser Printers

Lexmark International Inc. is recalling about 39,400 lower printers, including models that it manufactured for IBM and Dell Inc. The Lexington, Ky.-based company and the U.S. Consumer Product Safety Commission warned that the printers can short-circuit and expose users to a potential electrical shock. The recalled printers were sold from May to August, said Lexmark, which is offering to replace the device.

Sun Adds Blades To Its Netra Line

Sun Microsystems Inc. next year plans to add blade servers to its Netra line of systems for users in the telecommunications industry. Sun will offer two Netra blades — a Linux-based device built around Advanced Micro Devices Inc.'s Opteron processor and another that uses Solaris and Sun's Ultra-Sparc chips. Sun said the systems will have similar pricing, but it didn't disclose details.

Microsoft Upgrades Keyboards, Mice

Microsoft Corp. has added a curved keyboard with the same layout as traditional devices. It also introduced a wireless optical mouse for notebook PCs and a reader that lets users scan their fingerprints instead of entering log-in names and passwords when they boot up PCs. But the company recommended that corporate users continue to use strong passwords to protect data.

Operations Chief To Leave McAfee

McAfee Inc. said that Stephen Richards plans to retire from his job as chief operating officer and chief financial officer, effective Dec. 31. The Santa Clara, Calif.-based company is searching for a CFO but doesn't plan to name a new head of operations.

ON THE MARK



Sarb-Ox Docs Cost a Lot More ...

... than most people think. AMR Research Inc. in Boston estimates that the average company will blow through about \$1 million in Sarbanes-Oxley costs per \$1 billion in revenue, just to do what analyst John Hagerty calls "a document exercise" that organizes

everything for their auditors. Worse, unlike Y2K, which was a one-time crunch, compliance with the Sarbanes-Oxley Act is an annual event like tax preparations — but possibly even less fun. What contributes greatly to the cost, observes Neil Selvin, chief marketing officer at Vienna, Va.-based Approva Corp., is the fact that "auditors have homegrown rule books, and they don't have to tell customers what they're looking for." So companies search hither and yon for every conceivable compliance-related document because they don't want to get into hot water

with the Securities and Exchange Commission, which Selvin predicts "will make an example of a few people to prove that SOX has teeth." How? Delisting

companies from stock exchanges could be a popular punishment among the SEC's lawyers. And sending executives to jail likely will continue to be a crowd pleaser with them. If you're not already prepping for your audit, well, good luck. But you can still call Selvin. He claims that his software, BizRights 2.1, is based on real rules, written by real auditors whom Approva has hired away from PricewaterhouseCoopers, Ernst & Young and other firms. BizRights currently works with any SAP installation, but in early 2005 Approva will add PeopleSoft's applications to its auditing prowess. Starting at \$100,000, BizRights isn't cheap — but it costs less than doing it yourself, it appears.

Raid your compliance budget ...

... to get your software and hardware assets in order. That might be the strategy some CIOs are taking, given the uptick in business that Altiris

Inc. is attributing to regulatory compliance requirements. London, Utah-based Altiris makes tools to centrally manage IT assets throughout their life cycles, and Chief Technology Officer Dwain Kinghorn says some IT executives think ensuring that each device has the right software configuration and is secured will help them pass compliance audits. For example, he points out that handheld computers being used in the field need to be properly accounted for, with all end-user rights and privileges assigned by and known to IT. Plus, you have to be able to automatically destroy data on handhelds if they're not synchronized regularly with servers, in case they have been lost or stolen. Kinghorn says these security features will be added to the Altiris Client Management Suite in Q4.

Browser beta builds buyer trust ...

... by verifying Web site authenticity. Today, GeoTrust Inc. in Wellesley, Mass., releases the beta of TrustWatch, a validation tool that runs in Internet Explorer and Netscape browsers. TrustWatch indicates whether GeoTrust has verified a URL address as that of a legitimate Web site. As GeoTrust and VeriSign Inc. are the two leading companies used by online operations to validate that their transactions are secured, GeoTrust's new program is free to any one who downloads the ActiveX component from www.trustwatch.com. TrustWatch creates a tool bar in a browser that shows whether a Web site is verified as authentic or not, says GeoTrust CIO Neal Creighton. Blacklisted sites such as known phishing

operations draw a warning notice, and browsers aren't permitted to point to them. Creighton says GeoTrust and VeriSign have verified "only" 500,000 Web sites, less than 1% of the total number — making the rest of the Web potentially untrustworthy territory.

IBM's billion-dollar question ...

... is whether it will ship Domino 7 with DB2. At least that's what Steven Birchfield, CEO of Tucson, Ariz.-based Automation Coentre LLC, is asking. He thinks the debate inside IBM is whether to ship a scaled-down version of DB2 (with early next year) as a standard data store, in addition to the traditional Lotus Notes database. In the current beta of Domino 7, DB2 is offered as an option. Birchfield argues, "The problem with Notes has always been getting data out of it into other applications." That difficulty has forced third-party applications, such as his company's Tracker Suite, to extract the data to an external database. "And that's usually been Microsoft SQL Server because it was the cheapest," he says. If, as he suggests, DB2 is the underlying database, there's no need to port Notes apps to SQL Server. Plus, with the Notes installed base, DB2 will immediately eclipse Oracle as the world's top database. IBM is mum on the topic, but Birchfield speculates that the argument raging inside IBM is whether the market-share gains will outweigh the revenue from selling DB2 as an option to the Domino 7 release. Stay tuned. © 60313



54.4M Number of Web sites get a GeoTrust URL



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New Nortel Switches Provide SIP Support

Goal is to support 'virtual enterprises' for remote users

BY MATT HAMLEN

Nortel today will announce a series of software upgrades and new voice switches and phones that incorporate the Session Initiation Protocol standard and are designed to help remote workers function as part of integrated teams within large companies.

With so many workers now assigned to jobs outside of corporate headquarters, the demand for efficient and secure communications and collaboration capabilities is greater than ever, said Kent Richardson, vice president of global marketing at Nortel. The Brampton, Ontario-based company plans to differentiate itself from competitors by using SIP to support virtual enterprises, he added.

Among the new offerings, Nortel is announcing Release 4.11 of its Communications Server 1000 voice switch, which was previously called the Succession 1000. Richardson noted that the vendor is moving to adopt product names that better describe what its technology does. "We have funky names, and we are in the midst of brand simplification," he said.

The CS 1000 upgrade will integrate the product's IP

voice-switching capabilities with SIP-based voice, data and video applications supported by Nortel's Multimedia Communications Server 3000, Richardson said. The MCS 3000 is being upgraded to a Release 3.0 that offers common support for voice processing, call management, desktop video calling and collaboration tools, such as instant messaging software and Web-based applications for sharing documents in real time.

Franklin W. Olin College of Engineering in Needham, Mass., will upgrade to MCS 3000 3.0 next month and plans to add CS 1000 4.0 over the Christmas break or next summer to take advantage of the

SIP interoperability, said CIO Jeanne Kosuth.

The increased support for SIP should help make it "as easy as possible" for end users to connect to the school's network and lessen development demands as Olin considers adding applications, Kosuth said. She added that the upgraded MCS 3000 will also provide a single point of presence for end-user access to instant messaging tools.

The 225-student college has invested more than \$2.5 million in data and voice communications products from Nortel since it was founded in 2002, according to Kosuth. Olin evaluated the major networking vendors and chose

Nortel's Additions

Release 4.11 of the CS 1000 voice switch, which will support SIP and integrate with the Succession 1000. The new switches and phones will incorporate the Session Initiation Protocol standard and are designed to help remote workers function as part of integrated teams within large companies.

Nortel as its primary supplier partly because of the company's commitment to standards such as SIP, she said.

Olin also uses voice-over-IP

phones from Nortel, and Kosuth estimated that its annual network costs of \$500,000 would be more than doubled without VoIP. The use of VoIP technology supports a range of applications at the college, including unified messaging capabilities that allow voice mail messages to be directed to e-mail accounts.

Nortel also will announce a variety of other hardware and software products, including a new Communications Server 2000 voice switch that supports SIP and is designed for very large companies.

The new offerings show that Nortel is "committed to developing products for the enterprise business," said Zaus Kervanala, an analyst at The Yankee Group in Boston. Nortel now gets just 22% of its revenue from corporate users but should be able to increase that figure with features such as its support for SIP, Kervanala added. **C 48225**

Cisco Melds Add-on Features Into Branch-Office Routers

BY MATT HAMLEN

CISCO SYSTEMS Inc. tomorrow plans to announce an all-new line of branch-office routers that integrate basic routing capabilities with IP voice support, security tools and other functionality.

Features such as data caching and IP telephony have been available as add-ons to Cisco's existing branch routers for some time. But the add-ons severely limited the basic processing abilities of the routers, said Jeff Wilson, an analyst at Infonetics Research Inc. in San Jose. Cisco designed the new routers with increased memory and CPU capacity to overcome that problem, Wilson said.

The Integrated Services Router line includes seven models that range in price from \$1,395 to \$13,500, said Dave Frampton, a senior marketing director at Cisco. Two of the routers are aimed at corporate branch offices

while four were designed for smaller branches and one is intended for use by small businesses. All are due early next month, Frampton said.

IP Telephony Support

RBI. Dan Rauscher Inc., a Minneapolis-based broker, plans to deploy Cisco's new 2821 router this fall at five U.S. branches serving a total of 150 workers. If the pilot rollouts are successful, the broker will install the routers at up to 180 locations and convert the offices to IP telephony, said Rich Blasing, managing director of infrastructure services.

"This router product is architected with IP telephony in mind, while the previous attempts were add-on modules," Blasing said. "Collapsing functions on one box is a big feature because it makes things simpler and, from a support standpoint, a lot cleaner."

Because the 2821 will enable branch-office routers to move, add and change IP phones on their own, network operating costs should go down over time, Blasing noted. And with the routers supporting IP telephony in the branches, RBI, Dan Rauscher's annual telecommunications budget is expected to drop 20%, he said, although he wouldn't divulge cost details.

In addition, the new router will help support centralized voice mail in Minneapolis, so the brokerage will be able to expand and shift its sales force with more flexibility, Blasing said. He added that the full deployment and the addition of IP telephony could be completed within 10 to 24 months.

Wilson said Cisco developed the Integrated Services Router line because of competitive threats from vendors such as Juniper Networks Inc., which acquired NetScreen Technologies Inc. in April so it could integrate NetScreen's security capabilities into its routers. But, he said, the fruits of that acquisition are yet to be seen.

David Willis, an analyst at Meta Group Inc., agreed that competition pushed Cisco to release the new routers. But he added that "the idea of using a single modular platform just makes sense." **C 48327**

Correction

A story about autonomous agents that ran in last week's Technology section ("Agents at Change") incorrectly described BBN Technologies as a unit of Verizon Communications Inc. Cambridge, Mass.-based BBN became an independent company last March.

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Microsoft

BRIEFS

Microsoft Extends
SP2 Install Blocker

Microsoft Corp. said it will give corporate users more time to prepare for Windows XP Service Pack 2 by disabling the amount of time that a special registry key will prevent PCs from automatically downloading the update. The key was due to expire after 120 days, but to response to pressure from IT managers, Microsoft will select customers via e-mail that it will keep the key operational until April 12. For more details, go online: tldt.msk.409294.

IBM Adds 2-CPU
Opteron Server

IBM this week plans to begin limited shipments of an Opteron-based server designed to support dual-core versions of its processor that Advanced Micro Devices Inc. is due to release next year. The eServer 320 is a rack-mount ed system that starts at \$2,180 and can handle two Opteron chips. Users will be able to upgrade to AMD's dual-core devices when they're available, IBM said.

3Com to Expand
Router Offerings

3Com Corp. today will launch two routers for corporate networks and a family of six devices that support Digital Subscriber Line connections in branch offices. The enterprise-oriented Router 8040 and 8080 products support redundant and hot-swappable components and have been tested for interoperability with routers from Cisco Systems Inc. and other vendors, 3Com said.

Cisco Buys Net
Monitoring Tools

Cisco has agreed to buy NetScout Inc., an Austin-based vendor of network monitoring tools, for \$125 million. Cisco said its other network partners will provide Net-Solve's technology to users as part of their support efforts.

Wall Street Execs Detail
Updated Security Plans

NYSE, other firms tell Congress about steps they have taken since 9/11 attacks

BY DAN VERTON
WASHINGTON

AS THE THIRD anniversary of the Sept. 11 attacks approached last week, Wall Street executives outlined for Congress a series of physical and cyber security measures that continue to be revised to help protect financial trading systems in the U.S. Appearing at a House Financial Services Committee hearing, senior government officials and executives from key financial institutions in New York described the efforts that continue to go into bolstering security for the nation's critical financial trading systems.

Since Sept. 11, 2001, New York Stock Exchange Inc. has spent more than \$100 million to boost physical and cyber security and improve redundancy and business continuity, said Robert G. Breit, the NYSE's president and co-chief operating officer.

Among the improvements is a new contingency trading floor, an expansion of the emergency command center operated by Securities Industry Automation Corp. (SIAC), a remote network operations center and an ongoing effort to establish a remote national market system data center.

The NYSE has also deployed a geographically dispersed fiber-optic routing backbone that would allow equity brokers to maintain connections to the markets in the event of another 9/11-type of attack. Called the Secure Financial Transaction Infrastructure (SFTI), it connects more than 600 financial services firms.

All of the SFTI equipment, connections, power supply, network links and access centers are redundant, and its architecture features independent,

self-healing fiber-optic rings, making it independent of all other telecommunications circuits and conduits, Breit said. The NYSE and SIAC also recently completed work on a remote network operations center that's due to go live in the fourth quarter.

Meanwhile, John R. Mohr, executive vice president of The Clearing House Association LLC (TCH), a global payment systems firm that clears and settles more than \$1.5 tril-

lion in trades per day, said TCH hired a contractor to conduct both physical and cyber penetration tests. As a result of the tests, he said, the company reconfigured one of its key facilities, implemented biometric access-control systems and "all but eliminated visitor access to our operating centers."

TCH also developed a tertiary data center in another part of the country that is fully equipped to take over operation of its Clearing House Interbank Payments System (CHIPS) within an hour of a simultaneous failure of the other two CHIPS data centers,

said Mohr. Using custom data mirroring software specially developed by TCH, CHIPS was able to overcome the distance limitations of synchronous mirroring technology and still achieve recovery times consistent with synchronous mirroring approaches, he said.

Samuel H. Gaer, CEO of New York Mercantile Exchange Inc., said all essential employees at his organization have been issued cell phones with two-way radio capability and portable two-way e-mail devices, some of which can be used to make emergency phone calls. The workers were also given laptops with remote connection software and cellular modem cards to wirelessly connect to the exchange's system resources anywhere cellular coverage is available, Gaer said. **■ 40901**

Sybase Offers Free
Database for Linux

BY STACY COWLEY

In a bid to expand the customer base for its database, Sybase Inc. last week released a free but limited version of the software for deployment on Linux systems.

Sybase Adaptive Server Enterprise (ASE) Express Edition for Linux uses the same technology as Sybase's flagship ASE database, which has been losing ground to products from Oracle Corp., IBM and Microsoft Corp. ASE Express Edition is free for both development and production use, but it's limited to one CPU, 2GB of RAM and 5GB of total data storage. It can be downloaded from Sybase's Web site.

David Jacobson, Sybase's senior director of database and tools marketing, said the company is releasing ASE Express for free in hopes of attracting customers who will later upgrade to Sybase's ASE Small Business Edition, which has a license fee of \$4,995 per CPU, or Enterprise Edition, which has a fee of \$24,995 per processor. Support plans are avail-

JUST THE FACTS

The new ASE
Express Edition:

• Free, but both development and production use
• One processor, one CPU
• Supports 2GB of RAM
• Supports 5GB of total data storage

able for ASE Express starting at \$2,200 per year, but customers aren't required to purchase one.

Meeting Demand

"What we've found is that a lot of customers are turning to open-source databases because of tight budgets," said Jacobson. "But open-source databases are harder to use than conventional databases — you have to download, compile, develop, deploy and manage them."

While Sybase ASE is available for Windows, Linux and Unix, the company is releasing

ASE Express only for Linux. Jacobson said that's where Dublin, Calif.-based Sybase sees demand. "Microsoft has entry-level products, but for those moving from Unix to Linux, there's a gap," he said.

Forrester Research Inc. analyst Noel Yuhanna said the move is a good way for Sybase to recapture some of the market share it lost in recent years to the big three database vendors. "It's definitely a good value proposition compared to open-source databases," he said. "Sybase is a very mature database, known for reliability, availability and performance."

Yuhanna's chief complaint about ASE Express is the tight limitation on data storage. For most customers, Sybase isn't enough — projects using free open-source databases tend to average 10GB to 20GB, he said.

Sybase partner Amit Otkandhi, president of consulting firm mlogica Inc. in Irvine, Calif., said he expects to use ASE Express on several upcoming projects for customers. "Open-source is a good way to go, but down the line, as [companies] grow, it becomes an issue," he said. "The problem with MySQL is that they can't sustain themselves with it." **■ 40902**



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Judge Rejects Antitrust Claims, Lets Oracle Pursue PeopleSoft

Says DOJ didn't show that acquisition would hurt competition in apps market

BY MARY L. BOWEN

A federal judge last week cleared the way for Oracle Corp. to proceed with its 15-month-old hostile takeover bid for applications rival PeopleSoft Inc., rejecting the U.S. Department of Justice's effort to block the \$7.7

billion offer on antitrust grounds.

In a 164-page ruling issued late Thursday, Chief Judge Vaughan Walker of the U.S. District Court in San Francisco wrote that the DOJ's attorneys had failed to prove that a merger of Oracle and PeopleSoft "is likely substantially to lessen competition" in the business applications market.

Oracle immediately re-

ed a meeting with PeopleSoft's board of directors and called on PeopleSoft to lift the various poison-pill mechanisms it has put in place to fend off the bid. In a statement, Oracle declared that Judge Walker's decision "removes a significant roadblock to the acquisition."

However, the judge stayed his ruling for 10 days to give the DOJ a chance to file an appeal, and the agency said it's considering doing so.

"We are disappointed in the court's decision," R. Hewitt Pate, assistant attorney general in charge of the DOJ's antitrust division, said in a statement. "We believe the facts and evidence in this case support our

position that Oracle's proposed acquisition of PeopleSoft would result in a substantial lessening of competition in the markets for high-function human resources management and financial management systems software."

Oracle still faces an ongoing antitrust review by the European Commission. It also needs to overturn PeopleSoft's antitakeover provisions, which it's challenging in a lawsuit filed in Delaware's Court of Chancery. The trial in that case is scheduled to start Sept. 27.

Battles to Come

The two rivals are engaged in a legal battle in California's Alameda County Superior Court, where PeopleSoft has charged Oracle with unfair business practices. Oracle countered with a complaint claiming that PeopleSoft illegally refused to evaluate its bid and improperly

of operations at F.W. Murphy, a PeopleSoft user in Tulsa, Okla., said he's waiting to see more detailed responses from the DOJ and PeopleSoft before making any judgments about the ruling's potential impact on the takeover battle.

PeopleSoft won't necessarily throw in the towel yet, said Paul Hammerman, an analyst at Forrester Research Inc. "I wouldn't underestimate PeopleSoft's resolve to keep this from happening," he said. But he added that PeopleSoft, which blamed its weak second-quarter sales on the public relations fallout from the trial between Oracle and the DOJ, now likely will find it even harder to close deals.

Andrew Albarello, principal executive officer at Denver-based staffing company Remy Corp., said he would be comfortable buying more software from PeopleSoft. But he added that he's OK with the idea of PeopleSoft being acquired — just not by Oracle. **© 49350**

Stacy Cowley and Joris Evers of the IDG News Service contributed to this story.

ERP System

"As is often the case with a systems implementation of this size and scope, the first time some modules have been used (has) not been without complications," Norma Holland, an associate vice president at Indiana University, said via e-mail.

Holland said the glitches weren't caused by "the system proper" but apparently surfaced "at those places where fine-tuning was needed to align the university's business processes to the system specifications and functionality." She added that the start of classes limited the amount of time that was available for comprehensive testing of the financial aid software as well as end-user training.

To compensate for the unexpected shortfall of financial aid funds being disbursed to

students, the university has had to dip into its reserve accounts and issue no-interest, short-term loans to help cover tuition and other expenses. Said spokeswoman Sue Williams, School officials have also taken other steps, such as asking landlords not to charge students interest on late rent

payments and letting students draw money from the bursar's office account to pay for textbooks.

The exact origins of the financial aid processing problems are still being investigated. But Williams said it appears that most of the problems were caused by interface

issues between the PeopleSoft application and the loan systems at lending institutions such as the Student Loan Marketing Association, better known as Sallie Mae.

The university previously deployed PeopleSoft's human resources software and is using that without any apparent difficulties. But Williams said the financial aid module is as big and complex as all the other modules that the university has installed combined.

It's also more "sensitive" to exceptions than the university's older financial aid system was, she added. For instance, if there was a discrepancy between the amount of aid that a lending institution's system said should be issued to a student and what the university itself had earmarked, the financial aid software simply blocked the transaction.

In addition, although the system is centralized, it has to

take into account variables throughout the eight campuses, including the differences between part-time and full-time students and whether a campus does business with more than one lender.

The difficulties, university employees have been able to manually clear up about 300 accounts per day, and they hope to have them all corrected within three weeks, according to Williams.

PeopleSoft remained upbeat about the university's implementation of its software.

"Indiana University is a happy customer, and they're saying it's an internal issue and not a problem with the software," said PeopleSoft spokesman Steve Swasey. "It's a complex rollout, and we're working very closely with them. We have our consulting group in there and will continue to support them in every phase of the implementation." **© 49348**



At the PeopleSoft headquarters in San Francisco, the university's financial aid system is still being investigated.

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NETWORKS

IBM Adds Self-Management Capabilities to DB2 Upgrade

Says tools should help administrators streamline complex database tasks

BY MARC L. SOHONI

IN LAST WEEK said it's ready to ship the next version of its DB2 Universal Database software, which offers self-management capabilities that are designed to reduce administrative overhead even as databases continue to grow bigger.

Code-named Stinger, the DB2 8.2 upgrade has been in beta testing since May and will become generally available this week. As part of IBM's autonomic computing push, the database will come with new self-monitoring and

self-tuning features, said Jeff Jones, the company's strategy director for information management. The utilities should help database administrators complete complex tasks up to several times faster than they can now, according to IBM.

Automation Features

The new functionality includes a tool called Design Advisor that can automatically design and optimize the structure of a database, plus a related utility that automates administrative tasks such as table maintenance and data

backup. To help ensure uptime, another tool lets end-user PCs automatically fall over to a backup database if the primary DB2 server goes down. IBM also embedded its Learning Optimizer tool, which lets the database monitor and record query response times and find the fastest route to data.

Dallas-based Credit Union of Texas, which oversees about \$1.6 billion in assets, will start testing the new software this month for a potential rollout in December. Bruce Moore, the credit union's director of business intelligence, said Design Advisor could help speed up database configuration tasks for his team.

The credit union's data warehouse, which is built on DB2 8.1, captures 60 months' worth of customer and operational information for analysis.

With so much data but only a small staff to manage it, some things that could help boost database performance can't be done now, Moore said. He added that he thinks Design Advisor could reduce the time it takes to build month-end indexes by enabling him to use summary tables and techniques such as multidimensional data clustering.

For an incremental release, DB2 8.2 is a relatively significant rollout because of its new autonomic and integration capabilities, according to

NEW FEATURES

DB2 Universal Database 8.2

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IBM Corp.
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IBM Corp.
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Charles Garry, an analyst at Meta Group Inc.

"The bottom line is that we are moving away from day-to-day maintenance of the database as a resource and have to trust that the autonomic functions know more and can react more proactively than a human DBA can," Garry said.

© 40341

Continued from page 1

TagmaStore

three TagmaStore models also include up to 192 Fibre Channel ports that can be split into LQ24 virtual ports offering connectivity to an equal number of host servers.

Using new software called Universal Replicator and Universal Virtualization Layer, the TagmaStore arrays can replicate data over thousands of miles and pool storage capacity from HDS's existing Lightning and Thunder arrays and from rival products. However, the replication and storage virtualization features won't be available until December.

Users who have been beta-testing or reviewing the arrays said they have high hopes that the technology will offer greater consolidation and automation, allowing them to reduce manpower needs and their total cost of ownership for storage.

"There's a lot of different storage that we have in place, and we can consolidate it all

under one heading," Frank said. He added that United has bought a TagmaStore array and has been using it for the past month.

HDS said it also enhanced its HFCCommand management software so users can set policies to automate migration of data from high-end Fibre Channel disks inside the TagmaStore arrays to lower-cost ATA storage outside the devices and, ultimately, to tape libraries.

Tom Fleissner, a storage-area network architect at Pacific Capital Bancorp in Santa Barbara, Calif., said he hopes

TagmaStore's information lifecycle management features will let him automatically store critical data on high-performance disk drives and shunt less important data to more cost-efficient technology. Like United, Pacific Capital has already installed one of the new arrays.

Sun Microsystems Inc. and Hewlett-Packard Co. have signed agreements to resell the TagmaStore devices, expanding on existing high-end storage marketing deals that they have with HDS (Quick-Link 49251).

Tony Asaro, an analyst at

Enterprise Strategy Group Inc. in Milford, Mass., said that TagmaStore's scalability is unique and that its upcoming virtualization capabilities go well beyond what other storage vendors offer.

"It's basically a large virtualization appliance," Asaro said. "It extends all the software functionality to everything that's attached behind it." He was quick to point out, though, that pooling disk arrays from other vendors behind TagmaStore could void their product warranties.

But Jim Grogan, vice president of alliances at SunGard Data Systems Inc., said that as storage systems from vendors such as IBM or EMC become obsolete, he sees no problem in using them as back-end capacity for TagmaStore arrays. "You're getting a migration path," Grogan said.

SunGard stores 148TB of internal data and information from its disaster recovery clients on older-model HDS devices, and Grogan said he's disappointed that TagmaStore's virtualization features aren't ready now. "The multipatform management piece is one of the hallmarks of this," he said. "If they slip on that, that will be huge."

Grogan added that Universal Replicator could save him big money on network bandwidth. Instead of caching data and then sending it across IP networks asynchronously, the new tool writes the data to a disk, creates a time-stamped journal and replicates the information as bandwidth becomes available. That could free SunGard from investing in networks that cater to peak traffic levels, according to Grogan. "The difference between an OC6 and a T1 line is dramatic in price," he said.

Users also can divide TagmaStore arrays into as many as 32 logical partitions in order to dedicate storage capacity to specific applications. © 40332

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Grid Computing: Assessing the Reality and the Potential

Boston • September 21, 2004
The State Room • 60 State Street • 33rd Floor

7:30am to 8:00am

Registration and Networking Breakfast

8:00am to 8:15am

From Cutting Edges to Corporate Stage: Grid Computing and the Enterprise

Julia King, Executive Editor, Events, Computerworld

8:15am to 8:45am

Dynamic IT: Grid Computing and the Virtualization of Data Center Resources

John Humphreys, Research Manager, Enterprise Computing, IDC

8:45am to 9:15am

Real-World Grid Computing: Axiom's Adoption of a Grid-Based Infrastructure

Chris Bennett, Technical Team Leader, Workflow Technology Group, Axiom

9:15am to 9:45am

Preparing for Successful Deployment and Use ... Lessons Learned

Mark Forman, Former CIO, US Government, and EVP, Worldwide Services, Cassatt

9:45am to 10:15am

Refreshment and Networking Break

10:15am to 10:45am

Update from the Enterprise Grid Alliance (EGA)

Shawn Douglas, EMC Board of Director Representative

Technical Steering Committee, Enterprise Grid Alliance (EGA)

10:45am to 11:15am

The View of Grid Computing from Iron Mountain

Bill Olsen, VP of Engineering, Iron Mountain Digital Archives

11:15am to Noon

Key Considerations in Grid Computing Projects: An IT Executive Roundtable

Panel Moderator: Patrick Thibodeau, Senior Editor, Computerworld
Panelists: Ben Flock, VP of Virtualization and Application Frameworks, CIGNA; Mark Forman, Former CIO, US Government, and EVP, Worldwide Services, Cassatt; Bill Olsen, VP of Engineering, Iron Mountain Digital Archives

Noon

Program Concludes

Selected speakers include:



Julia King
Executive Editor,
Events,
Computerworld



Ben Flock
VP of Virtualization
and Application
Frameworks,
CIGNA



John Humphreys
Research Manager,
Enterprise Computing,
IDC



Chris Bennett
Technical Team
Leader, Workflow
Technology Group,
Axiom



Patrick Thibodeau
Senior Editor,
Computerworld

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SugarCRM Offers Open-Source Sales App

BY TODD R. WEISS
Open-source start-up SugarCRM Inc. last week released the first commercial version

of its Linux-based CRM software, promising to support corporate users through a combination of in-house tele-

phone lines and third-party service calls.

Sugar Sales Professional 1.5 starts at \$149 per seat for the

first year, which includes technical support and administrator training. The software runs natively on Linux and supports the Apache Web server, MySQL database and PHP programming language. But it

can also run on Mac OS X and Windows systems, said John Roberts, co-founder and CEO of Cupertino, Calif.-based SugarCRM.

The company will provide telephone support and bulletin boards for users, as well as software updates, patches and fixes. It also plans to sign on business partners to handle field service work, Roberts said. "Yes, it is open-source, but a real company is there to support it," he added.

Chris Le Tocq, an analyst at Guernsey Research in Los Altos, Calif., said users will judge SugarCRM's offering "on the quality of the support" that the company provides. "That's going to be up to Sugar — to keep people happy [and feeling] that their support is blue-ribbon," Le Tocq said.

Roberts helped start SugarCRM after working at CRM vendor Epiqary Inc. In April, when SugarCRM released an early version of its application, there were just 48 downloads by users. Last month, there were 13,051 downloads, Roberts said.

License Limits

Sugar Sales Professional is licensed under the Sugar Public License, which is a copy of the Mozilla Public License. Users have to release any code changes they make to the open-source community only if they plan to distribute the software to another party, said Roberts. But, he added, the license prevents companies from selling modified code.

Version 1.5 of Sugar Sales Professional includes a plug-in that lets Microsoft Outlook users move customer e-mails into the CRM application with a single mouse click. Roberts said it also provides tools for importing data from proprietary CRM tools, including products from Salesforce.com Inc., Best Software Inc., SalesLogix Inc. and Microsoft Corp.

After the \$149 introductory price for the first year of use, Sugar Sales Professional subscribers will have to pay an annual fee of \$239 for continued support and services, according to SugarCRM. **© 48314**

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DON TENNANT

Living for This

IF THERE'S ANYTHING I LOVE more than a baseball metaphor, it's a baseball simile. So, what better way to salute my predecessor? Following Maryfran Johnson in this job is like following Barry Bonds in the batting order. In fact, it's even tougher — Barry is no Maryfran. For one thing, what does Barry do every time

he hits a home run? He stands there and stares at it. I mean, you just want to smack him and scream, "Stop watching and start running, Barry!"

Let me tell you, Maryfran was never a stand-and-watch player. If she hit a homer, she'd be sprinting to first before the sound of the bat hitting the ball had made it past the pitcher's mound. And that can't be easy in a pair of Christian Louboutin sling-back heels.

So the order to fill Maryfran's shoes is taller than the Green Monster. And not just because I'd look preposterous in a pair of designer sling-backs.

I was sitting next to Maryfran in the ballroom at the Waldorf-Astoria in New York last March when she was announced as the recipient of the first Timothy White Award for editorial ethics and courage. I think so highly of Maryfran, I probably wanted to hear her name read even more than she did. And when we did hear her name and she looked over at me a bit stunned, I remember smiling and hoping she could see the admiration and respect I have for her.

Seeing Maryfran on a different team is going to be as tough as it is seeing Nomar in a Cubs uniform. But players move to different teams all the time. You just have to suck it up, regroup and rededicate yourself to being the best. And you need to consider it an opportune time to analyze

your game plan to determine whether anything needs to be changed.

Clearly, when you're the current World Series champion — in our case, holder of the title of Magazine of the Year, awarded by the American Society of Business Publication Editors — you'd be foolish to make any sweeping changes. So you'll see us proceed as determinedly as the

Big Unit going for that last out in the ninth — delivering the useful, unique information you've come to rely on and expect in print, online and at our growing number of roundly applauded user-focused events.

At the same time, it makes sense

for us to assess whether we have any resources that are being underplayed. The fact is, the international reach Computerworld has as the hub of the world's largest global IT media network and as the flagship publication of International Data Group has been sitting on the bench far too long. That's going to change. Virtually everyone who reads this publication works for a company that has interests outside of this country. We have the unparalleled ability to provide you with the information you need to formulate global IT strategies, and we're going to start taking advantage of it.

We're going to be covering all the IT management bases you need to have covered, with an award-winning editorial team that's full of gold gloves. And anyone who tries to match our coverage of those bases will find us stealing them more aggressively than Pete Rose doing a headfirst slide.

So keep your expectations high. To borrow that cool MLB catchphrase: I live for this. ☐ 48302

Don Tennant



PIMM FOX

The Color of Microsoft's Money

IMAGINE for a moment that someone gave you \$5 for each desktop PC in your organization that was running a Microsoft operating system such as Windows XP. Not bad, I reckon.

The more PCs your company had, the more money you would rake in. Well, that's called a kickback, and it's probably illegal. If it isn't illegal, it could ruin your reputation, and your co-workers might even beat you up. But that's exactly the kind of relationship Dell appears to have with Microsoft.

Michael Robertson wrote about this in his Sept. 2 column at www.inspire.com/links_michaelrobertson.php.

According to Robertson, it's estimated that Microsoft pays Dell anywhere from \$2 to \$10 for each computer Dell sells that has Windows XP installed.

And you thought the U.S. Department of Justice had slapped Microsoft over the knuckles so that it would play nice and offer each of the top 20 manufacturers its operating systems at the same price.

Well, it's not too surprising that Microsoft figured out a work-around. Microsoft pays computer makers based on the number of computers they sell, sort of like an incentive program.

Thereby getting around the agreement it signed with the Justice Department.

OK, I know, this is just business, and Robertson's complaint sounds like whining. But the advance of Linux as an alternative desktop operating system is being hampered not because of technology but because of a sweet-heart deal between the giants of the hardware and software markets.

This business relationship is putting the brakes on innovation. It's a severe impediment to millions of people trying Linux. And it's costing you money. Robertson says that when two top executives from Inspire (yes, he's the



CEO of that Linux vendor) to make to visit Dell to talk about what's new in open-source, Dell executives canceled the meetings at the last moment.

Dell sold desktops with Linux installed from 1998 to 2001. And the company still offers workstations and servers with Red Hat Linux. But that's a far cry from actually making it popularly available.

Microsoft also pays Dell if the computer maker recommends Microsoft Windows XP Professional. I found the recommendation on almost all of the Web pages I visited at Dell's site. Why does Dell tie its fortunes so closely to Microsoft? Because the deal makes Dell lots of money.

Is Windows really the best operating system available? Haven't we moved beyond being spoon-fed bundled software? I'd rather be allowed to make that judgment than have a supplier offering products without disclosing that it gets paid to push particular operating systems or software.

Of course, Dell could just pass that Microsoft money on to all the IT and purchasing departments at large corporations.

I bet that money could buy plenty of machines and even tutorials to workers could then install Linux themselves. **408271**

cerned about backlash as jobs are lost to offshore outsourcing. But those same companies have probably underestimated the ripple effect of their outsourcing decisions.

At a major financial services organization, the CIO and his direct reports conducted a six-week series of "town hall" conference calls with the global IT department being made on outsourcing.

Those events gave employees the opportunity to vent their concerns, raise issues that management hadn't considered and cut down on potentially damaging rumors. The CIO partly credits keeping the lines of communication open for a decline in voluntary staff attrition following the announcement of the outsourcing decision.

But the people who rely on the services that will be outsourced need to be part of the process as well. The IT department's internal constituencies want to be part of the process, and they want guarantees that outsourcing decisions



won't undermine their own goals and objectives.

Actively managing attrition. Companies that don't have a policy of weeding out their less productive performers on a regular basis develop cultures where forced attrition is virtually nonexistent, where everyone knows there is dead weight and where top performers get discouraged.

Outsourcing can actually be a strategic means of

hump-starting a massive attrition policy without having to resort to drastic reductions in force. A Fortune 1,000 service provider, for example, is weeding out the bottom 10% performers in its IT workforce and filling some of those roles with third-party resources.

Investing in education and retention. It seems counterintuitive, but the best companies keep investing in IT training even as they outsource. Internal personnel have valuable proprietary knowledge about the company's staff, processes and systems. Growth-oriented companies are beefing up internal

training, sending people to executive ed programs and actively supporting employee efforts to earn additional certifications.

Minimizing unintended consequences.

Companies considering outsourcing need to carefully examine how short-term, cost-driven decisions might undercut strategic intent. A comprehensive sourcing strategy helps a company identify hidden consequences.

A company that typically hires people into its IT department from undergraduate university programs almost learned a lesson about unintended consequences the hard way. This firm has historically promoted its top performers from programmer to IT manager to IT executives. It was considering outsourcing virtually all of its application development, but then it realized that such a decision could result in a lack of IT managers three to five years down the road. Now it may scale back its offshore plans. **408082**

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READERS' LETTERS

TOM WEAHLAND Outsourcing Best Practices

COMPANIES are starting to consider their outsourcing decisions strategically, and not just as cost-cutting exercises.

Companies that are outsourcing as a short-term cost-cutting opportunity are almost always disappointed with the results. But companies that approach outsourcing as one element of an overall business strategy are applying some specific best practices to reach their goals more quickly and with fewer roadblocks.

Communicating openly from Day 1. Companies that develop casual internal communication plans about sourcing strategies are far less likely to experience employee backlash as roles begin to move offshore. Eighty-four percent of the buyers of outsourcing services in DiamondCluster's "2004 Global IT Outsourcing Report" said they're con-

Make or Buy? Don't Forget Staff, Process

THE BULLET POINTS in Gary H. Anther's "Roll Your Own" article (QuickLink 47684) relate the situations where I've best to build were excellent, but I have found there is another important point: process. Here at CenterPoint Properties, we evaluated and defined our business processes first. Then we found software to fit our needs.

By putting process first, we not only produced optimal business practices (because we didn't have to compromise them for an existing software package), but we also had an easier buy/sell decision to make. We had a solid set of requirements that allowed us to properly investigate packaged applications, purchase the ones that worked and build the ones we needed.

Scott Zimmerman
CIO, CenterPoint Properties
Thurst, Oak Brook, Ill.

MOORE DEVELOPMENT took its Microsoft Visual Studio (.Net technology) in the hands of a properly trained and experienced programmer can produce highly tailored solutions in a very short time

that often outperform the generalist commercial off-the-shelf (COTS) solutions. In my opinion, the make-vs. buy decision often depends on management's commitment to their IT staff. If they have developed a good staff, then they will trust that staff to support and maintain the in-house applications. Otherwise, they will look to COTS as a long-term, more secure solution.

Fred Reinhold
Manager of IS,
University of Virginia
Facilities Management

Congress Misses VoIP Big Picture

PLAN FOSTER IS CONCERNED that Congress should get out of trying to regulate VoIP as it does phone service, but he is missing the big picture - although most of Congress is, too ("Hear Up on Congress," QuickLink 48040). There's no reason to have one set of rules for phone calls and another for broadband services. South Korea got it right, and it has 80% penetration in broadband. Compare that

with 2% in the U.S. What's different in South Korea? No separate rules. TV broadcasts, Internet access, voice calls and other services are offered without multiple tier-by-tier regulations or rules about who can offer what. This has provided South Korea with its current economic boom. Until Congress and the FCC get a clue and stop the current regulations and start thinking about technology in a more rational way, the U.S. will continue to fall behind the rest of the world in communications, which affects everything else we do.

Harry Holt
Systems engineer, Middlebich,
Va., Harryholt@gmail.com

No More Bull

IN REFERENCE to Steve Mager's July 28 letter, "No Bull Approach Gets Thumbs Up" (QuickLink 47975), in which he wondered what happened to my son and the bull discussed in my column "Tim OK: the Bull Is Dead": I was once told that according to Zen philosophy, at the end of a discourse between a teacher and a student, the student should be left with greater curiosity

than what he had at the start of the discourse.

Now regarding the bull. My son, Ray (now the CEO of my company), was driving home around midnight when a Texas longhorn walked onto the road. Luckily for Ray, the bull got the front of the collision. The car's horn went and was damaged, but Ray did not have any injuries. The farmer who owned the property and the bull reimbursed our auto insurance company for the damage to the car.

Geoff K. Kagar
President, Center for
Project Management,
San Ramon, Calif.,
ggkagar@center-qpm.com

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to James Eklund, letters editor, Computerworld, PO Box 971, 500 Old Connecticut Path, Framingham, Mass. 01701. Fax: (508) 879-4843.

E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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TECHNOLOGY

09.13.04

COMPUTERWORLD INNOVATIVE TECHNOLOGY

AWARDS

Apparel Maker Gets Instant Feedback With Online Survey Tool

BY TODD R. WEISS

When women's dancewear and activewear maker Danskin Inc. created a Web site in 2001, it didn't exactly set the dance world spinning on its toes.

Beginning with only one product line in order to avoid conflicts with traditional brick-and-mortar retailers, the company set out to gauge the interest of customers in buying Danskin products online. Less than two years later, in January 2003, the New York-based company made the move to expand its site and online product offerings.

But simply adding more merchandise to a hastily assembled trial Web site wasn't exactly a great sales strategy, says Eric Nadler, the company's vice president of sales operations. "We knew the site was not all it could be," he says. "It wasn't done in an aggressive manner. We were just a Yahoo store, just trying to feel the waters out."

Nadler and another executive were given responsibility for improving the site, and they quickly felt overwhelmed. "We knew we had graphics, search and site problems, but we couldn't prioritize them," Nadler says.

At an online retail trade show last year, they found CS SiteManager, a Web-based customer-satisfaction application from ForeSee Results Inc. in Ann Arbor, Mich. With CS SiteManager, Danskin can get instant reactions from customers about what's good or bad about its Web site, and that feedback can be used immediately to make midcourse corrections.

The product runs behind the scenes and gives random customers a pop-up window containing a brief survey to get input about their shopping experiences at Danskin.com.

For Danskin, the information garnered from the ForeSee, continued on page 32

Cool ON PAPER, Innovative IN PRACTICE

When put in the hands of customers, this year's 30 award-winning technologies realized their full potential for cutting costs, reducing waste and increasing productivity.

Eric Nadler, Vice President of Sales Operations, Danskin Inc. CS SiteManager helped Danskin quickly gauge the interest of customers in buying Danskin products online. Less than two years later, in January 2003, the New York-based company made the move to expand its site and online product offerings.

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BuRate.com, C.O.R.E. Feature Animation, Harvard University Life Sciences, Mainframe Entertainment Inc.

ForeSee, continued from page 37 survey has been a gold mine. "What it really does is allow us in an analytical and scientific manner to learn what satisfies our customers and what their needs, wants and desires are in utilizing our Web site," Nadler says. "We can see what changes we can make that will have the biggest bang for the buck."

Using the research data and statistical methodologies from the customer input analyzed by ForeSee, Danskinn was able to pinpoint the e-business areas that needed work, Nadler says. "Customers for the most part want to share their experiences and help you build a better site," he says.

Within six weeks of incorporating CS SiteManager, Danskinn learned that site navigation was one of the biggest sticking points for customers. After spending 15 minutes making site changes, Danskinn immediately began seeing increased online sales. Nine months later, incremental sales increases were apparent, much of which

were attributable to CS SiteManager, Nadler says.

"It was looking at customer service from an entirely different angle, and

that's what we thought was cutting edge," Nadler says. "We were going to be able to do our jobs better. It absolutely has paid for itself." **Q 48999**

WINNER

URL: www.foreseeresults.com

LOCATION: Ann Arbor, Mich.

CATEGORY: Web site management

TECHNOLOGY: CS SiteManager

HOW IT WORKS: The pop-up online survey asks Web shoppers about their

general satisfaction with the site's functionality, whether they intend to return to the site and about its look and feel, pricing and value, says Larry Freed, CEO and president of ForeSee. With a typical customer-response rate of 6% to 12%, a company can gain critical information from users to increase sales and ROI, according to Freed. "We

help diagnose the problem," he says. CS SiteManager uses statistical methodologies from the American Customer Satisfaction Index to create its data.

CUSTOMER SAMPLING: Lower

Records, Home Shopping Network, Congular Wireless, Hainmark Flowers Inc., Forbes.com, the National Hockey League, DTE Energy Co.

TIP: Set Web site investment priorities around direct input from customers.

WHAT'S IN STORE: "The prospects for an independent company that surveys Web site users and provides actionable advice to Web site builders appear bright," says Michael Gorch, an analyst at Westport, Conn.-based Robert Francis Group Inc.

Millipore Takes Fast Track To Asia With Global Network

Millipore Corp. wanted its Japan-based customers to move to Web ordering, but first it had to convince them that

using the Web was quicker than sending a handwritten fax. That wasn't necessarily simple to do.

The corporate IT strategy for this

Billerica, Mass.-based bioscience company is to keep its data services centralized. That meant customers from Asia would be connecting to Web servers halfway around the globe. And that was the problem.

The round-trip time for a packet traveling from the East Coast to San Francisco, for instance, is about 50 milliseconds. The travel time to Tokyo, however, can be as much as 200 milliseconds. While that's a relatively big difference, it's still not enough to create a headache for the user.

What slows Web performance is the number of round trips between the host and user that are needed to load a Web page. Those round trips can total 40, 50 or more and add significant amounts of time.

In Millipore's case, it took seven to 12 seconds for each page to load in Japan. And customers there felt it took longer to complete the Web order, which involved loading multiple pages, then it did to write out and fax an order, says Jeff O'Halloran, manager of Internet services at Millipore. "We

NetU, continued on page 37



Jeff O'Halloran says NetU's technology helped Millipore speed up online transactions.

■ The number of round trips between the host and user was reduced
■ Web page loading times in Japan were reduced, from seven to 12 seconds to under two seconds.

ForeSee, continued from page 31
surveys has been a gold mine. "What it really does is allow us in an analytical and scientific manner to learn what satisfies our customers and what their needs, wants and desires are in utilizing our Web site," Nadler says. "We can see what changes we can make that will have the biggest bang for the buck."

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TECHNOLOGY: CS SiteManager

HOW IT WORKS: The pop-up online survey asks Web shoppers about their general satisfaction with the site's functionality, whether they intend to return to the site and about its look and feel, pricing and value, says Larry Freed, CEO and president of ForeSee. With a typical customer-response rate of 8% to 12%, a company can gain critical information from users to increase sales and ROI, according to Freed. "We

help diagnose the problem," he says. CS SiteManager uses statistical methodologies from the American Customer Satisfaction Index to create its data.

CUSTOMER SHARING: Tower Records, Home Shopping Network, Circular Wireless, Hallmark Flowers Inc., Forbes.com, the National Hockey League, DTE Energy Co.

TIP: Set Web site investment priorities around direct input from customers.

WHAT'S IN STORE: "The prospects for an independent company that surveys Web site users and provides actionable advice to Web site builders appear bright," says Michael Dorch, an analyst at Westport, Conn.-based Robert Francis Group Inc.

Millipore Takes Fast Track To Asia With Global Network

BY PATRICK THIBODEAU

Millipore Corp. wanted its Japan-based customers to move to Web ordering, but first it had to convince them that

using the Web was quicker than sending a handwritten fax. That wasn't necessarily simple to do.

The corporate IT strategy for this

Billerica, Mass.-based bioscience company is to keep its data services centralized. That meant customers from Asia would be connecting to Web servers halfway around the globe. And that was the problem.

The round-trip time for a packet traveling from the East Coast to San Francisco, for instance, is about 50 milliseconds. The travel time to Tokyo, however, can be as much as 200 milliseconds. While that's a relatively big difference, it's still not enough to create a headache for the user.

What slows Web performance is the number of round trips between the host and user that are needed to load a Web page. Those round trips can total 40, 50 or more and add significant amounts of time.

In Millipore's case, it took seven to 12 seconds for each page to load in Japan. And customers there felt it took longer to complete the Web order, which involved loading multiple pages, than it did to write out and fax an order, says Jeff O'Halloran, manager of Internet services at Millipore. "We

Next, continued on page 34



At Millipore, Next Technology helped Millipore speed up online transactions.

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NetLi, continued from page 32 wanted to make sure the online transaction process was as fast or faster than it would take to handwrite this paper and fax it in," O'Hallorin says. One idea was to build and maintain a data center overseas to handle Asia-based Web services, but it was rejected because of the expense. Instead, two years ago, Millipore turned to NetLi Inc., then a relatively new company with a technology for speeding Internet connections.

Palo Alto, Calif.-based NetLi addressed the chief problems of Web performance — the TCP and HTTP Internet protocols — by building a network with points of presence in the Asia-Pacific region and Europe.

When customers in Japan tune in Millipore's Web address, their use is routed to a NetLi data center, which uses a protocol the company built for optimizing Web page loading and reducing the number of round trips.

URL: www.netli.com

LOCATION: Palo Alto, Calif.

CATEGORY: Application development

TECHNOLOGY: Net lightning

HOW IT WORKS: Specialized servers and protocols developed as a global network eliminate the Internet's performance limitations. It optimizes Web page loading with a protocol that overcomes problems with TCP and HTTP to exchange information without multiple round trips. The company couples that technology with its own points of presence in Asia and Europe.

O'Hallorin says the service has cut Web page loading times in Japan to well under two seconds. Implementing it required no changes to Millipore's

WINNER

CUSTOMER SAMPLING: NetRatings Inc., Hewlett-Packard Co., Thomson Financial, Tektronix Inc.

WHAT'S IN STORE: According to Peter Sevcik, an analyst at Charlotte-based, Va.-based application performance measurement firm NetForecast Inc., NetLi's technology is unique. He says it helps address growing problems in delivering applications — the increasing complexity of Web pages coupled with larger distances as a result of globalization.

"A lot of people think it's about bandwidth," says Sevcik. But, in fact, the problem is the number of trips involved between the user and host, he says.

IT infrastructure. If NetLi's service were to fail, the worst that would happen is that customers would be routed directly to Millipore's site. **C 49002**

Shell Pipeline Cuts Paper Sludge With Mobile Tracking System

After implementing SAP AG's ERP system throughout the company in 2001, Shell Pipeline Co. needed to find a way to improve the efficiency of its U.S. pipeline maintenance operations.

Houston-based Shell wanted to eliminate the extra time and work it took for its pipeline technicians in the field to write up inspection and repair reports by hand — which was sometimes done on the backs of envelopes

Activated 80% of paperless business function.
 Saves 20% to 30% of hours per week by eliminating paper preparation time.
 Eliminates up to eight hours of data entry time per person per week for rekeying of work order information.

WINNER

URL: www.infloware.com
LOCATION: Burnaby, British Columbia
CATEGORY: Mobile wireless
TECHNOLOGY: Telosmark Mobile Enterprise

HOW IT WORKS: This packaged mobile application suite draws data from multiple back-end systems using either the customer's enterprise application integration architecture or Infloware's own APIs to deliver data to mobile devices, including laptops and handhelds. Data is communicated back to the enterprise via a wireless connection or a "link and sync" cradle. Infloware supports data systems such as Oracle, SAP, Siebel, MRO Software Inc.'s Maime and Intra Corp.'s Emapac.

CUSTOMER SAMPLING: Hydrin One Inc., Shell Oil Co., Unilever, the U.S. Navy

TIP: "Do it right the first time," says Jerry Meerkatz, CEO and president of Infloware. "A good portion of our customers tried to build a solution first and then realized that packaged apps are easier, faster and more cost effective to deploy. They ended up wasting cash and postponing ROI."

WHAT'S IN STORE: "Ongoing research by the The 451 Group strongly indicates that mobile initiatives are rapidly evolving, especially in such field force areas as asset management, where mobile companies such as Infloware are focusing particular attention," says Tony Riccio, an analyst at the New York-based firm.

"This year is a bona fide breakthrough for mobile play with many mobile players seeing significant enterprise interest. Rather than chasing pilots, the stronger mobile players are now securing real business," he says. "Infloware is finally seeing positive movement in its pipeline of customers and should see some significant new deployments in the second half of 2004."

— and then return to the office to manually input the data into the SAP Preventive Maintenance application, says Brian Ashe, former manager of measurement and quality services at Shell Pipeline, a wholly owned subsidiary of Shell Oil Products U.S.

Two years and several pilot programs later, Shell decided to implement Infloware Software Inc.'s Telosmark Mobile Enterprise suite to allow its pipeline technicians as well as improve reporting compliance, according to Ashe.

"Before, they would have to go through 27 to 29 different screens to input each piece of data, and they found they were spending more screen time than wrench time in the field," he says.

Today, Telosmark enables the technicians in the field to enter data into handheld devices, which tie in with the SAP application, giving them access to equipment information and work orders and saving time. **C 49000**

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NetLi Inc.

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LOCATION: Palo Alto, Calif.

CATEGORY: Application development

TECHNOLOGY: NetLightning

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CUSTOMER SAMPLING: NetLightning Inc., Hewlett-Packard Co., Thomson Financial, Weltona Inc.

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IT infrastructure. If NetLi's service were to fail, the worst that would happen is that customers would be routed directly to Millipore's site. **#49002**

Shell Pipeline Cuts Paper Sludge With Mobile Tracking System

BY LINDA ROSENCRANCE

After implementing SAP AG's ERP system throughout the company in 2001, Shell Pipeline Co. needed to find a way to improve the efficiency of its U.S. pipeline maintenance operations.

Houston-based Shell wanted to eliminate the extra time and work it took for its pipeline technicians in the field to write up inspection and repair reports by hand — which was sometimes done on the backs of envelopes

Infowave Software Inc.

URL: www.infowave.com

LOCATION: Burnaby, British Columbia

CATEGORY: Mobile/enterprise

TECHNOLOGY: Telispark Mobile Enterprise

HOW IT WORKS: This packaged mobile application suite draws data from multiple back-end systems using either the customer's enterprise application integration architecture or Infowave's own APIs to deliver data to mobile devices, including laptops and handhelds. Data is communicated back to the enterprise via a wireless connection or a "link and sync" cradle. Infowave supports data systems such as Oracle, SAP, Siebel, MRO Software Inc.'s Maestro and Indus Corp.'s Empac.

CUSTOMER SAMPLING: Hydro One Inc., Shell Oil Co., Unilever, the U.S. Navy

TIP: "Do it right the first time," says Jerry Meerkatz, CEO and president of Infowave. "A good portion of our customers tend to build a solution first and then realized that packaged apps are easier, faster and more cost-effective to deploy. They ended up wasting cash and postponing ROI."

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Conference At-a-Glance (Subject to change)

For details, updates and to register visit www.snnwusa.com/cw

MONDAY, OCTOBER 25

9:30am to 10:25am

ADDRESSING HIGH DENSITY COOLING

Addressing High Density Cooling of Storage Networking Equipment at the Facility Level
David Sasse, Founder & President, DUB Associates

STORAGE BENCHES AND TRENDS

Storage Benches and Trends
Dennis Martin, Senior Analyst, and Greg Schuch, Senior Analyst, Evaluator Group

SECURITY DEVELOPMENTS

Power Statements, Questions and Answers Techniques
Howard Golden, Founder, Howard Golden Associates, Inc.

10:30am to 11:30am

Role of Server Blades and Virtualization in Next Generation Data Center
Alan Tanaka, Founder and Consulting Analyst, Tanaka Group

Why Tape Continues to Make the Grade
Richard Harsh, President, Tape Technology Council

Communication Skills for the IT Technic
Bill Reardon, Director of Storage Architecture, Storage Technologies

11:30am to 1:00pm

Lunch

Afternoon

SNIA Tutorial Sessions

1:00pm to 2:15pm

- Data Lifecycle
- Virtualization & Securing Your Storage
- Focus on Networking Your Storage
- Focus on Storage
- SAN Management
- Voice of the User

IDC Briefing Session

1:00pm to 2:15pm

IDC
In this fast-paced session, IDC's top storage analysts and executive computer, growing interest in networking-based storage architecture and access, its impact on storage components, systems, networks, management and services.

IT End-User Golf Outing

2:00pm to 4:00pm

Quantum
The pre-conference conference sponsored by Quantum at the JW Marriott Grande Lakes Resort. Complimentary 18-hole golf outing for registered IT end users. Other participants, including sponsors and vendor representatives, may play at an additional fee. (and are responsible for all applicable golf outing expenses.)
To secure your spot, contact Michael Kennedy at 1-800-450-4529.



Co-located with:



7:00pm to 9:00pm Welcome Reception

For more information and to register, visit www.snnusa.com/cw or call 1-800-883-9090

TUESDAY, OCTOBER 26 General Sessions Begin

- 8:30am to 9:15am **Don Tapscott, Renowned Bestselling Author of *The Naked Corporation, Growing Up Digital and Paradigm Shift***
The Future of Knowledge Management
 Springfield, MA: CEO of a team system and author of the book
- 9:15am to 9:45am **Kevin Rollins, President & CEO, Dell**
- 9:45am to 10:15am **Keth Glennen, VP & CIO, Northrop Grumman IT**
- 11:00am to 11:30am **Elevating the Art of Storage**
 Springfield, MA: President of the company
- 11:30am to noon **Industry Presidents' Roundtable: A Market Outlook**
 Moderator: Don Tapscott, Author of *The Naked Corporation Growing Up Digital and Paradigm Shift*
- 12:15pm to 1:30pm **CONCURRENT LUNCHEON SESSIONS**
- General Networking Luncheon**
 On the Topical List
- Luncheon Session**
 Steve Opatowski, Founder
 Enterprise Storage Group
- Measuring the Value of IT Investments**
 Richard Sander
 Managing Partner
 InterUnity Group
- Storage and More: Is Convergence Ahead?**
 Networking, security and storage drive storage technology headlines, spending plans and vendor relationships.
 Ken Mail, CEO & Founder, TheInfoPro (TIP)
- 1:30pm to 2:00pm **End User Case Study: Best Practices: Data Center Consolidation**
 Don Cohen, VP Technology Architect, National Merit
- 2:00pm to 2:30pm **Greg Meyers, Chairman & CEO, Brocade Communications Systems**
- 2:30pm to 3:00pm **End User Case Study: Evaluating Options for Business Continuity/Disaster Recovery Plans**
 Don Mauer, Manager of Technology and Infrastructure, International Paper
- 3:00pm to 3:45pm **CTO Insights Panel**
 Moderator: Jim Dwyer, Tago, CEO & Founder, Tago Partners International
- 4:00pm to 5:30pm **CONCURRENT SESSIONS**
- Experts with Gartner / Interoperability & Solutions Demo Open **5:30pm to 8:30pm**

WEDNESDAY, OCTOBER 27

- 8:30am to 9:15am **Nick Carr, former Executive Editor of the Harvard Business Review and author of *Does IT Matter?***
- 9:15am to 9:45am **End User Case Study**
- 9:45am to 10:15am **Industry Leader Presentation**
End User Case Study: Realizing the Vision of Management Simplicity and Improved Business Processes in a Demanding, Distributed, High-Performance Environment
 Michael Reiter, VP & CIO, Burlington Coat Factory
- 11:00am to 11:30am **The Half-Life of Storage Trends**
 Peter van Oostem, Chairman & CEO, ADL
- 11:30am to 12:15pm **Panel: End Users Speak Out**
 Moderator: Jim Dwyer, Editor, InterNetwork World
- 12:15pm to 1:45pm **Expo & Luncheon**
- 1:45pm to 2:15pm **End User Case Study**
- 2:15pm to 2:45pm **Industry Leader Presentation**
- 2:45pm to 3:30pm **Analyst Roundtable Panel**
 Moderator: Jim Dwyer, Tago, CEO & Founder, Tago Partners International
- 3:45pm to 5:15pm **CONCURRENT SESSIONS**
- 5:15pm to 7:15pm **Expo and Reception**
- 7:30pm to 9:00pm **Gala Evening Dinner and Entertainment**
- See SNW's Interoperability & Solutions Demo**
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THURSDAY, OCTOBER 28

- 7:30am to 8:30am **Breakfast**
- 8:30am to Noon **CONCURRENT SESSIONS & BUSINESS LUNCHEONS**
- Noon **Conference Concludes**

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John Greer
 Director of Infrastructure
 Pacific Gas & Electric



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October 25-28, 2004

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Enterprise Management World, in conjunction with Computerworld and the Distributed Management Task Force (DMTF), proudly announces the results of the first annual "Best Practices in Enterprise Management" Awards Program. This program recognizes case studies highlighting noteworthy solution implementation projects and deployments.

Winners in each of the following categories are:

Distributed Systems and Infrastructure Implementation

- Northern Trust - Chicago, Illinois
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- Marriott International, Inc. - Washington, DC

Honorable Mention: The George Washington University - Washington, DC

Industry Regulation Compliance and Corporate Governance

- CDC Isis - Boston, Massachusetts
- El Camino Hospital - Mountain View, California

Honorable Mention: Directpointe, Inc. - Linden, Utah

Managing to Improve TCO/ROI

- Arizona Public Service Company - Phoenix, Arizona
- Inflow, Inc. - Thornton, Colorado

Honorable Mention: Prudential Financial - Newark, New Jersey

Innovation and Promise

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Prior to 2001, Documentum Inc. had used a smattering of Web conferencing platforms to support internal training, corporate communications and non-bound marketing activities. Problem was, the Web conferencing systems were becoming increasingly expensive to run and placed severe restrictions on the number of people who could access them.

At that time, John Grubbs, manager for education information systems and e-learning at the document management software maker, had a mandate from his chief financial officer not to increase Web conferencing costs. "We were going to lose 30% of the service level if we'd stayed" with one Web conferencing vendor at the dollar amount the CFO had allocated, he says.

Enter Camtasia. Mass-based Interwise Inc., Calif.-based Documentum a hosted Web conferencing platform called ECP Connect that supports an unlimited number of users for a \$75,000 flat-fee annual license. In comparison, bids from competing vendors ranged from \$750,000 to \$560,000 for 500 concurrent-user licenses.

In addition, Interwise was able to provide Documentum with several technical advances that other vendors weren't able to offer, such as voice-over-IP (VoIP) support, editable recording capabilities and integrated scheduling for Microsoft Outlook.

Documentum has achieved other

Eliminated \$450,000 in Web conferencing average charges
Got more than \$450,000 in annual phone bridge and other expenses through VoIP support capabilities

benefits from the Web conferencing system. In 2000, the last year that the company was using Web conferencing technologies from other vendors, it paid \$450,000 in average charges, says Grubbs. Those fees have been eliminated through the flat-fee agreement with Interwise.

Moreover, because the other Web

conferencing vendors didn't support VoIP, Documentum's phone bridge and other costs swelled to more than \$600,000 in 2000. Those costs have also been eliminated.

More important, the Interwise system has effectively supported Documentum's education business. After Sept. 11, 2001, revenue from Documentum's classroom training dropped and then flattened out when customers became reluctant to fly employees for classroom training, says Grubbs.

However, revenue for the company's online training courses supported by the Interwise system have grown steadily since they were launched two and a half years ago and now account for 15% of the division's annual sales, says Grubbs. In fact, the last quarter's revenue for the North American education division was approximately \$1.3 million. **48001**

WINNER

URL: www.interwise.com

LOCATION: Santa Clara, Calif.

CATEGORY: Enterprise systems

TECHNOLOGY: ECP Connect

HOW IT WORKS: Delivers an unlimited number of Web meetings, audio conferences, e-learning courses and Web seminars for a fixed price. A distributed-server architecture and a multimedia conferencing bridge provide scalable and secure integrated conferencing. Windows or Java-based clients can connect to geographically distributed communication servers that route synchronized real-time or

recorded audio, video and data streams

CUSTOMER SAMPLING: QAD Inc.

Halliburton Co., Documentum, Nestle SA

PNV Technologies Inc.

TIP: Integrate the system with other key business applications and processes (such as portals or CRM systems) so it integrates into employees' daily work

WHAT'S IN STORE: "One of the trends I see is that conferencing is becoming presence-enabled - it's merging with instant messaging," says Lou Latham, an analyst at Gartner Inc. "A lot of the same vendors are offering products in both spaces, and I see the lines between them starting to blur."

Intelsat Stays a Class Ahead With Data Management Software

BY STEVE ALEXANDER

For the IT department at Intelsat, the telecommunications firm that launched the first commercial communications satellite in 1965, the challenge isn't reaching for the stars but trying to keep up with the pace of its own business.

When it needed a new data warehouse, Bermuda-based Intelsat chose management software from London-based Kalido Ltd., in the hope of being able to rapidly update its business models to cope with massive corporate changes.

Intelsat needed to install a new data

warehouse that could be updated rapidly as a result of big changes: In 2001, it became a private company after 37 years as a quasi-governmental institution. It then launched a massive reorganization and, earlier this year, acquired satellite operations from Loral Space and Communications Ltd.

"When we went private, we needed better financial information because we needed to be quicker," says Pradip Sitaram, director of IT for business and operational support systems in Intelsat's ground and information systems department.

"Kalido said if we changed our basic

data model, they would change the data warehouse to fit us," Sitaram says. "As a proof of concept, we were able to automatically link our revenue and satellite capacity in the warehouse in 17 days, which allowed us to analyze how much revenue came from which region. If we had followed normal data-warehouse technology, this

Kalido, continued on page 40

Automatically linked revenue and satellite capacity in the warehouse in 17 days

Data warehouse was adopted to a major corporate reorganization in seven days. Downloads are fast and post-auction costs can be compared in fewer than 30 days.

Documentum Saves Big With Web Conference Software for Training

BY THOMAS HOFFMAN

Prior to 2001, Documentum Inc. had used a smattering of Web conferencing platforms to support internal training, corporate communications and outbound marketing activities. Problem was, the Web conferencing systems were becoming increasingly expensive to run and placed severe restrictions on the number of people who could access them.

At that time, John Grubbs, manager for education information systems and e-learning at the document management software maker, had a mandate from his chief financial officer not to increase Web conferencing costs. "We were going to lose 30% of the service level if we'd stayed" with one Web conferencing vendor at the dollar amount the CFO had allocated, he says.

Enter Cambridge, Mass.-based Interwise Inc. To start, Interwise offered Pleasanton, Calif.-based Documentum a hosted Web conferencing platform called ECP Connect that supports an unlimited number of users for a \$75,000 flat-fee annual license. In comparison, bids from competing vendors ranged from \$290,000 to \$360,000 for 300 concurrent-user licenses.

In addition, Interwise was able to provide Documentum with several technical advances that other vendors weren't able to offer, such as voice-over-IP (VoIP) support, editable recording capabilities and integrated scheduling for Microsoft Outlook.

Documentum has achieved other

benefits from the Web conferencing system. In 2000, the last year that the company was using Web conferencing technologies from other vendors, it paid \$450,000 in overage charges, says Grubbs. Those fees have been eliminated through the flat-fee agreement with Interwise.

Moreover, because the other Web

conferencing vendors didn't support VoIP, Documentum's phone bridge and other costs swelled to more than \$600,000 in 2000. Those costs have also been eliminated.

More important, the Interwise system has effectively supported Documentum's education business. After Sept. 11, 2001, revenue from Documentum's classroom training dropped and then flattened out when customers became reluctant to fly employees for classroom training, says Grubbs.

However, revenue for the company's online training courses supported by the Interwise system have grown steadily since they were launched two and a half years ago and now account for 15% of the division's annual sales, says Grubbs. In fact, the last quarter's revenue for the North American education division was approximately \$1.3 million. **© 48001**

Interwise Inc.

URL: www.interwise.com

LOCATION: Santa Clara, Calif.

CATEGORY: Enterprise systems

TECHNOLOGY: ECP Connect

HOW IT WORKS: Delivers an unlimited number of Web meetings, audio conferencing, e-learning courses and Web seminars for a fixed price. A distributed-server architecture and a multimedia conferencing bridge provide scalable and secure integrated conferencing. Windows or Java-based clients can connect to geographically distributed communication servers that route synchronized real-time or

recorded audio, video and data streams.

CUSTOMER SAMPLING: QAD Inc., Hobartton Co., Documentum, Nestlé SA, RWQ Technologies Inc.

TIP: Integrate the system with other key business applications and processes (such as portals or CRM systems) so it integrates into employees' daily work.

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Kalido, continued on page 40



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*Source: Fibre Computing: Beyond the Near Data Center, IDC Capital Reports Oct 2003

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Kalido, continued from page 36 would have taken us many months.

"Then, in March 2003, the company did a massive reorganization, but we were in production with the new data warehouse model in a week," Sitaram says. "I don't know if that would have been feasible in the past, but with Kalido, it took us less than 30 days."

"The hardest thing, normally, is that IT can't move fast enough. But in this data warehouse project, the reverse was true," Sitaram says. "The business was not able to move fast enough for us in IT." **Q 48012**

Alexander is a freelance writer in Edina, Minn. Contact him at sjalexander00@aol.com.

Mellon Gets Closer to Clients Through Search

Mellon Financial Corp. spent 2002 evaluating search engines for its customer-facing Web site, its intranet and the sites that the financial services company develops for corporate clients.

Edward Cymbalik, a vice president and product manager in Mellon's corporate e-commerce services group, says the search was a big deal because the Pittsburgh company's centralized IT group standards on technology components, dubbed "bricks," that are then used across all business units.

"We settled on iPhrase as our Web search brick," Cymbalik says. "It's the standard technology we use for searching our own Web sites and any sites we create for customers."

Boof up a search engine to make it a CRM tool, and you get iPhrase. Technologies Inc.'s OneStep, which promises to improve search capabilities. The flashiest benefits are to be found in retail, where OneStep helps businesses squeeze more revenue out of online shoppers by calling attention to products they may not find on their own.

OneStep consists of a search server,

Proposed OneStep

- Searches return fewer, better-targeted hits, which increases productivity
- Adaptive learning engine boosts cross-selling and upselling

URL: www.kalido.com

LOCATIONS: London, with U.S. headquarters in Burlington, Mass.

CATEGORY: Data management

TECHNOLOGY: Kalido Dynamic Information Warehouse

HOW IT WORKS: This data warehouse life-cycle management software uses technology patented in the U.K. (patent pending in the U.S.). All data warehouses embed information in tables that express relationships, but Kalido has dramatically reduced the number of tables required

WINNER

and cut the time needed to update tables for a new business model.

CUSTOMER SAMPLING: BP PLC, Celibury Schweppes PLC, Ingram Pacific Corp., Libat Breweries of Canada

TIP: Kalido's software was designed for complex projects whose total cost is at least \$500,000.

WHAT'S IN STORE: "Although Kalido has many differentiating, if not unique, features that greatly facilitate quick data warehouse deployment, the company's primary challenge is not its technology, but rather its visibility [outside Europe]," says analyst Mike Schiff at Current Analysis Inc.



Installing iPhrase's OneStep search engine has been a piece of cake, says Edward Cymbalik.

Integration hooks and management tools. An adaptive learning engine is the star of the show; the vendor says OneStep can interpret users' natural language queries to bring answers rather than a list of links.

Integrating iPhrase has been a piece

of cake, Cymbalik says. Mellon has deployed it in six Web sites so far, with another three in progress. **Q 48011**

Editorial is a Computerworld contributing writer in Southboro, Mass. Contact him at sciff@edwardcharter.net.

WINNER

URL: www.iphase.com

LOCATION: Bedford, Mass.

CATEGORY: CRM

TECHNOLOGY: OneStep

HOW IT WORKS: This advanced search tool seeks to improve Web-site responses to customer queries. Its analytics compares data on what language customers are using and what products or services they're examining. That informa-

tion is then used to fine-tune the search engine, increase self-service and provide a profile that can be used to upsell and cross-sell.

CUSTOMER SAMPLING: Dell Inc., Netegrity Inc., Bank One Corp., Blue Cross and Blue Shield of Massachusetts Inc.

WHAT'S IN STORE: Analyst David Daniels of Jupiter Research says that in the next three years, products like Phrase will replace today's basic site-search mode of "with the supplier and more effective methodology of discovery and managed dialogue."



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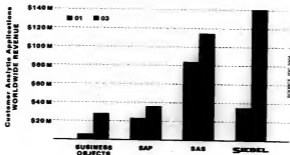
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Implementing the Vico 1000 took only a few hours, says First American's Noel Levasseur.

Bank's Mixed Infrastructure Gets Organized With Network Tool

With fewer than 20 IT staff members, First American Bank "uses a lot of [software] packages and integration," says Noel Levasseur, executive vice president of technology.

The Elk Grove Village, Ill.-based bank has hosted its own online banking applications since 1999. "We've experienced what everyone else has regarding platform solutions—they're unreliable," Levasseur says. The bank needed to gather as much information as possible about the state of its IT in-

frastructure because "with self-service [banking] apps, there's no longer a spokesperson between you and your customer," he says. "So it's important to eliminate negative experiences."

Levasseur says the bank faced another common challenge: The Web and application servers, databases and load-balancing tools work so well that "you may not even know it if they're in a degraded state."

To keep track of things, the bank bought a Vico 1000 application infrastructure management appliance from Vico Inc. The Vico 1000 plugs into a network and automatically learns what hardware and Web applications are present and studies normal usage patterns. With a Vico engineer assisting, First American's implementation took only a few hours, says Levasseur.

- Installation took just a few hours.
- Existing IT staff can manage Vico without outside help or new hires.

Hospital Gets Faster Access to Storage With iSCSI Technology

When Johnson Memorial Hospital needed to replace its existing storage-area network (SAN), it looked for a way to upgrade without spending a lot of money or burning out its two-person IT department.

"Over the past three to four years, our data center doubled in size and our user population expanded about 30%, and we were just running out of storage space," says Mark Rivard, network systems specialist. His IT department serves the Stafford Springs, Conn., hos-

pital and several satellite facilities. "We will be bringing in scheduling systems and electronic archiving systems, and we're heading toward paperless medical records, so we needed huge amounts of storage," Rivard says. At the same time, the hospital want-

- Savings of about 60% on total SAN
- SAN is now managed by in-house staff rather than an outsourcer

WINNER

URL: www.vico.com

LOCATION: Austin

CATEGORY: Hardware

TECHNOLOGY: Vico 1000

HOW IT WORKS: The appliance plugs into a corporate network and detects, analyzes and controls service-delivery problems on databases, Web servers and application servers. It presents its findings on a single dash-board-style interface.

CUSTOMER SAMPLING: Burlington Coat Factory Warehouse Corp., Santa Clara County (Calif.)

TIP: While Vico helps determine the best configuration for your environment, you may want to outline certain policies. For example, during business hours, some enterprises might increase the priority level of an online store.

WHAT'S IN STORE: Jasmine Noel, an analyst at Peak, Noel & Associates, says the Vico 1000's ability to learn network patterns is impressive. So is its modeling capacity. If the appliance detects a service-level problem, "it asks, 'What would happen if we added server capacity?' It doesn't just blindly throw more hardware at it," she says.

The bank had looked at other products, Levasseur says, "but it looked like we'd need to hire someone to keep an eye on them. Our existing staff can manage the Vico." **C49046**

Ulfelder is a Computerworld contributing writer in Southboro, Mass. Contact him at sulfelder@charter.net.

ed to abandon an existing Fibre Channel SAN that wasn't expandable. That prompted Rivard to look at Ethernet-based SANs. He chose PeerStorage Array, an Ethernet-based product from EqualLogic Inc., which he estimated would be easy to configure and manage and cost about a tenth as much to expand as a Fibre Channel-based SAN.

Rivard says he expects to save about 60% on total SAN costs as a result of automating administrative functions, discontinuing outsourcing and lowering network expansion expenses.

One factor that swung the deal in EqualLogic's favor was that each copy of the SAN product came with its own software, a feature aimed at eliminat-

EqualLogic, continued on page 44



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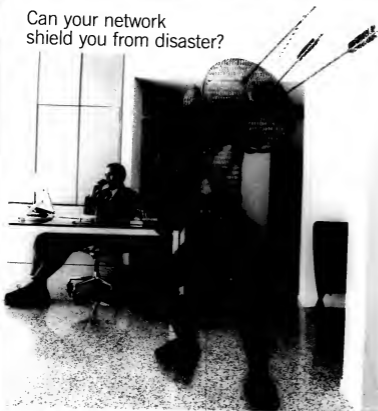
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EqualLogic, continued on page 44

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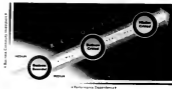
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vetted IT customers," those companies that used technology but didn't produce it well. In numerous vendors they became offer leading-edge technology products or services that provide measurable payback. We received approximately 270 responses. Customer nominations were verified by Computerworld via e-mail.

Computerworld then surveyed those voters about the nominated technologies. Customer references were contacted for each vendor being considered. Surveys were vetted by a panel of Computerworld editors and then divided among a panel of IT executives for further evaluation.

Special thanks go to our panelists: Cathy Hanks, principal, Cathy Hanks & Associates; Frank A. Quilley, senior vice president, homeland security, Pent Systems; Government Services, David R. Borman, senior vice president and CEO, Owens & Minor, Inc.; Bob Palmer, senior vice president and chief information officer, Commerce Technology Services; Joseph A. Puglisi, CEO, Emergent Group, Inc.; Jeff Dixon, CEO and vice president, nCircle; William Theodorakis, president, Theodorakis Exports Inc.; Priscilla Tate, senior director of the Technology Management Forum; and Patrick Moore, vice president, The Center for Internet Security Systems Inc.

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EqualLogic, continued from page 42
ing bottlenecks that occur when a SAN is scaled up. It works by using more controllers to connect disk arrays to the server.

Another factor in the selection was efficiency. Rivard says he was impressed by EqualLogic's approach in storing frequently used documents on the outer part of the disk platter, where they can be accessed more quickly because the disk is spinning more rapidly at its outer edge. Older, less-frequently used documents are stored closer to the center of the disk. **■ 40009**

Alexander is a freelance writer in Edina, Minn. Contact him at alexander00@aol.com.

ADM Fends Off Threats With Automated Vulnerability System

Vulnerability and patch management is already a nightmare for most IT security managers. But what makes it worse is the added challenge of trying to figure out how to prioritize remediation work so that the most critical vulnerabilities get fixed first.

That situation led Gary Mruz, director of technical systems at Archer Daniels Midland Co., to nCircle Network Security Inc. and the vendor's IP360 vulnerability management application.

Mruz says his team had been managing vulnerabilities manually and was spending an inordinate amount of time keeping up with threats and applying patches. It was a recipe for disaster.

"Even if we had unlimited staffing resources to toss at the vulnerability concern, there was no way we could have hired enough people to do a thorough enough job or respond to attacks fast enough," he says.

The company needed an automated system to help identify and prioritize security vulnerabilities, so Mruz turned to nCircle. Although Mruz says he looked at other tools, most were server- and agent-based applications that added unnecessary complexity to the problem. "What came to the surface immediately with nCircle's approach was that it sat outside the servers," he says. "We didn't have to modify our servers or clients to make it work."

The other aspect that caught Mruz's attention was IP360's centralized reporting approach, which meant he

EqualLogic Inc.

URL: www.equallogic.com

LOCATION: Nashua, NH

CATEGORY: Storage

TECHNOLOGY: EqualLogic ProStor age Array 100E

HOW IT WORKS: It connects SAN servers via Ethernet and automates administrative functions. It also provides a "virtualized" view of SAN capacity so storage appears to reside on one drive even though it's spread over many drives. Each array can be a stand-alone unit, offering linear performance growth.

CUSTOMER SAMPLING: Solvent LLC, Zenon Environmental Inc., Cytress Corp.

TIP: PerStor uses iSCSI-based storage arrays that cost less than Fibre Channel but also provide lower performance.

WHAT'S IN STORE: "There is a substantial opportunity for low-end servers in corporations to be connected to SANs, but the cost has prevented that to go true," says Bob Passmore, a Gartner Inc. analyst. "This opportunity tends to be limited to the low end of the market because the high end is well established around Fibre Channel SANs."

IP360

- Centralized reporting approach meant no additional staff to hire.
- Withstood the Blister worm and other recent high-profile Internet threats.

wouldn't have to increase staff just to make the application work.

And while IP360's reporting function doesn't differ much from other applications, Mruz says the key differentiator is its assessment and prioritization capability. "You still have to assess what a vulnerability really means in

your environment," says Mruz, who credits IP360 for helping Decatur, Ill.-based Archer Daniels Midland withstand the Blister worm and other recent Internet threats.

One of the most useful features of IP360, Mruz says, is its ability to set a baseline for vulnerability remediation on particular servers. "From that point forward, new vulnerabilities show up as a spike in the reporting," he says. "These alerts will show us very quickly where we have new issues to address, and it automatically points you to the patch or the fix. And the good thing is that it might not be a new vulnerability that somebody has discovered, but it might be something that we did that caused a potential problem. In essence, it's always there looking over our shoulders." **■ 40013**

WINNER

Findings to the Win Manager

CUSTOMER SAMPLING: Pacifica Credit Union, U.S. Agency for International Development, Office of Naval Intelligence.

TIP: "You have to plot and decide where the devices should go, and you have to define your baselines for patching," says Archer Daniel Midland's Gary Mruz. "If, though there's no way to avoid this initial evaluation, you never have to do it again."

WHAT'S IN STORE: "nCircle's FactoredReasoning raises the bar in the vulnerability management industry, bringing more thorough vulnerability identification and lowering the false-positive noise of misidentified systems and vulnerable systems," says Dan Feldman, an analyst at Delphi Group.

URL: www.ncircle.com

LOCATION: San Francisco

CATEGORY: Security

TECHNOLOGY: IP360

HOW IT WORKS: The nCircle IP360 Vulnerability Management System uses a highly scalable, secure, appliance-based architecture that consists of two components. The IP360 Win Manager is a hardened appliance that serves as the central data repository and management platform, and the IP360 Device Profiler is a hardened, diskless appliance that profiles devices and securely reports its

EqualLogic, continued from page 42
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EqualLogic Inc.

URL: www.equallogic.com

LOCATION: Nashua, N.H.

CATEGORY: Storage

TECHNOLOGY: EqualLogic PeerStorage Array 100E

HOW IT WORKS: It connects SAN servers via Ethernet and automates administrative functions. It also provides a "virtualized" view of SAN capacity, so storage appears to reside on one drive even though it's spread over many drives. Each array can be a stand-alone unit, offering linear performance growth.

CUSTOMER SAMPLING: Solent LLC, Zenon Environmental Inc., Cypress Corp.

TIP: PeerStorage uses SCSI-based storage arrays that cost less than Fibre Channel but also provide lower performance.

WHAT'S IN STORE: "There is a substantial opportunity for low-end servers in corporations to be connected to SANs, but the cost has prevented that up to now," says Bob Passmore, a Gateway Inc. analyst. "This opportunity tends to be limited to the low end of the market because the high end is well established around Fibre Channel SANs."

ADM Fends Off Threats With Automated Vulnerability System

BY DAN VERTON

Vulnerability and patch management is already a nightmare for most IT security managers. But what makes it worse is the added challenge of trying to figure out how to prioritize remediation work so that the most critical vulnerabilities get fixed first.

That situation led Gary Mrux, director of technical systems at Archer Daniels Midland Co., to nCircle Network Security Inc. and the vendor's IP360 vulnerability management application.

Mrux says his team had been managing vulnerabilities manually and was spending an inordinate amount of time keeping up with threats and applying patches. It was a recipe for disaster. "Even if we had unlimited staffing resources to toss at the vulnerability concern, there was no way we could have hired enough people to do a thorough enough job or respond to attacks fast enough," he says.

The company needed an automated system to help identify and prioritize security vulnerabilities, so Mrux turned to nCircle. Although Mrux says he looked at other tools, most were server- and agent-based applications that added unneeded complexity to the problem. "What came to the surface immediately with nCircle's approach was that it sat outside the servers," he says. "We didn't have to modify our servers or clients to make it work."

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URL: www.ncircle.com

LOCATION: San Francisco

CATEGORY: Security

TECHNOLOGY: IP360

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findings to the VMC Manager.

CUSTOMER SAMPLING: Palatka Credit Union, U.S. Agency for International Development, Office of Naval Intelligence

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WHAT'S IN STORE: "nCircle's Factor80 licensing raises the bar in the vulnerability management industry, bringing more thorough vulnerability identification and lowering the false-positive noise of misidentified systems and vulnerabilities," says Dan Kelderman, an analyst at Delphi Group.

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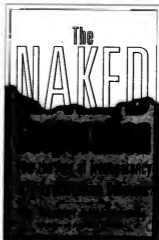
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— Fast Company

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Parts Supplier Boosts Network Capacity With WAN Compressor

BY DAN VERTON

Executives at automotive parts retailer O'Reilly Automotive Inc. thought their existing 12Mbit/sec. dedicated communications link provided all the performance they needed. But the retailer soon found that the link between its headquarters in Springfield, Mo., and its disaster recovery center in Texas couldn't transmit large amounts of data to the company's IBM iSeries server during the replication window. That often left transactions waiting to be transmitted because the link was fully utilized. If an outage were to occur, the pending transactions would be lost.

"We were using a DS-3 at 12Mbit/sec., and we were still having latency issues and congestion problems," says Mark Garton, business continuity leader. That was unacceptable for one of the largest specialty auto retailers in the U.S., with 1,000 stores and 11 distribution centers. Garton says he tested WAN compression and acceleration to assess the feasibility of curtailing connectivity costs while increasing the reliability and frequency of backups.

Expand Networks Inc.'s Accelerator was the very first product the company tried. And to the retailer's surprise,



network capacity was immediately quadrupled. "Expand's acceleration results surpassed all our expectations," says Dave Steinkle, systems management team leader. "We got full T3 capacity out of our oversubscribed 12Mbit/sec. link." But the real bonus was the cost savings, says Steinkle.

"With the four times increase in network capacity, we will be able to downgrade our link to 6Mbit/sec. and save over \$32,400 annually," he says.

There are also tangible benefits from a performance and management perspective, adds Garton. "Expand's technology is caching as well as compression technology, and that's a perfect fit for us because the nature of our data is that there are a lot of headers and a lot of repetitive data," he says. "Now, we probably average 9Mbit to 10Mbit/sec. and peak at about 40Mbit to 45Mbit/sec. with the Expand Accelerators in place." ☐ 40096

Expand Networks Inc.

URL: www.expand.com

LOCATION: Roseland, N.J.

CATEGORY: Network management

TECHNOLOGY: Accelerator

HOW IT WORKS: Accelerator is designed to improve enterprise application performance over wide-area networks by using next-generation WAN compression. In addition to increasing WAN capacity, Expand's quality-of-service technology, known as Instant QoS, groups traffic types and eliminates the need to update and maintain the quality-of-service configuration each time a new application is rolled out. It also enables managers to prioritize bandwidth allocation among applications.

CUSTOMER SAMPLING: Continental Airlines Inc., U.S. Environmental Protection Agency, Federal Aviation Administration, U.S. Marine Corps

TIP: "It was a very straightforward instal-

lation," says Mark Garton, business continuity leader at O'Reilly Automotive. "We installed it between the switch and the router. There was some configuration work that had to be done on the Expand unit, but they walked us through it. And now Expand has added an installation wizard that makes it possible for a non-technical person to install."

WHAT'S IN STORE: Expand "reflects the market trend," says Lawrence Orant, an analyst at Gartner Inc. "By adding more application performance features to their products, they are blurring the lines between straight data compression and QoS vendors."

However, Orant cautions that a very competitive market will force Expand to continue to focus on improving application performance and technology partnerships. "Enterprises don't want to get multiple boxes from multiple vendors in their branch offices," he says. "Solutions will need to be more broad-based and address various inefficiencies across protocols and packaged applications."

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Career Watch

A not-so-optimistic look at the IT hiring scene for college graduates; fatter paychecks for key IT players; and keeping your politics to yourself on the job. **Page 58**

OPINION Your Other IT Budget

Gearing up for the budget wars? A different mind-set could provide additional ammunition — and allies. Bart Perkins tells how. **Page 59**

Q&A Emotional Intelligence

Burned out? You may be working at cross-purposes with your emotional wiring, says Eugene Kazuminskiy, author of *Managing Psychological Factors in Information Systems Work*. Harnessing your psychological strengths can help beat burnout and free up energy and creativity. **Page 54**



AIDED BY THE INTERNET and advanced search techniques, a handful of companies is leading a revolution in the way new products are designed and developed.

By looking beyond their own R&D labs — to suppliers, universities, freelance inventors and even competitors — they are accelerating the pace of innovation while sidestepping the costs and risks of in-house research.

"The R&D model that most companies are following is broken," says Larry Huston, vice president for research and development at Procter & Gamble Co. in Cincinnati. "There's a drive to increase innovation budgets beyond the [revenue] growth of the firm. That's not a sustainable business model."

But P&G, which spent \$1.7 billion on R&D last year, has found a new model, called open-market innovation. Indeed, the consumer products maker has embraced the idea so enthusiastically that it no longer refers to its product-innovation process as R&D; it's now C&D, for "connect and develop."

P&G makes the connections among its employees and external sources with a variety of tools and techniques, including an intranet, Web sites, commercial and homegrown search engines as well as several "innovation networks" — intermediary companies that match innovation seekers and suppliers. In just two years, the company has boosted the percentage of product innovations that come from outside sources from less than 20% to 35%. P&G's CEO wants to raise that to 50%.

"This is a classic application of the Internet, going back to its origins," says Darren Carroll, CEO of InnoCentive Inc., one of the innovation matchmakers. "For those of us on Arpanet in the beginning, it was all about scientists and engineers sharing problems and solutions."

69 This is a classic application of the Internet, going back to its origins.

Darren Carroll, CEO, InnoCentive Inc.

Innovation Networks

The following are some of the resources P&G uses to connect and develop:

- **InnovationNet**, InnoCentiveNet is an intranet Web portal for 18,000 P&G innovators in R&D, engineering, market research, purchasing and patents. Nabil Sakhal, a senior vice president for R&D, calls it a "global lunchroom" for the exchange of ideas.

INNOVATION Inside Out

IT is helping visionary companies harness outside talent to boost innovation while minimizing costs and risks. By Gary H. Anthes

Doing the Numbers

Larry Huston, vice president for research and development at Procter & Gamble, makes the case for out-of-the-box innovation.

■ **P&G** has 7,500 researchers in 150 branches of science. Outside of P&G, there are 1.5 million equally qualified scientists around the world. "So, for every person we have, there are 200 on the outside," Huston says.

■ **R&D staff at U.S. companies cost their employers well over \$400,000 a year on average.** "Somebody in India with a master's degree in a science probably starts at about \$3,000 a year," Huston says.

■ **P&G is a \$51 billion company growing at 6% to 7% a year. It wants half of all its product innovations to come from external sources.** "You can do the math," he says. "If 50% is coming from outside, this is over a \$1 billion challenge to bring sales in from the outside through connect and develop."

■ **InnoCentive.** Founded by Eli Lilly and Co. but operating independently, Andover, Mass.-based InnoCentive claims to be the "largest virtual laboratory in the world." It posts scientific problems from its 30 "seeker" members to a proprietary network of 70,000 registered "solvers" around the world. Each posting includes a promised cash award for the solution. (The problems, which are well defined and typically have probably correct answers, can also be viewed at www.innocentive.com/services/Project/ProjectInfo.asp.) "The success rate so far has been around 50%," Saklaba says. "Not bad for problems we failed to crack in-house."

■ **ModSigma Inc.** This Cleveland-based firm helps its 50 or so clients prepare technical briefs describing projects or problems they are trying to solve and then sends the briefs — without identifying the originating companies — to thousands of researchers around the world. The idea is not to get back specific solutions, as InnoCentive does, but to identify people most likely to be able to provide solutions on a contract basis.

■ **YourEncore Inc.** An Indianapolis-based network of about 400 retired scientists and engineers, YourEncore was created 10 months ago by P&G and Lilly but now operates independently. It matches its members with clients for specific, short-term job assignments and pays them their salaries at retirement plus 20% (Quicklink 48720).

Risk-Free R&D

Indianapolis-based Lilly, another pioneer in open-market innovation, supplements its internal R&D resources with the services of InnoCentive and YourEncore. Alph Bingham is a vice president at Lilly Research Laboratories and InnoCentive's chairman. He says that a company like Lilly traditionally would look on the outside for the very best person — perhaps even a Nobel laureate — to solve a hard research problem. But it might pay that person \$50,000 for six months of work and still not get a solution.

"Betting on the Nobel laureate is the best way to go if I have to bet on one person," Bingham says. "But what if an assistant professor at Morgan State University is actually better qualified to solve that particular problem, at that moment, than anyone else on the planet? But I can't find him, so I use a mechanism like InnoCentive."

InnoCentive pays its award money — typically between \$5,000 and \$100,000 per problem — only when someone comes up with a workable solution. "So oow the second reason for going this way manifests itself," Bingham says. "I don't pay the \$50,000 until I know the problem was solved."

The third advantage of going with an external innovation procurer is that doing so preserves the anonymity of both buyer and seller, so there's an intellectual property firewall between both parties. "It gives a company like Lilly the ability to hide its problems in plain sight," Bingham says. "Someone can look at our problem and not know it's a drug application. It could be a pesticide application."

Search Magic

Cutting-edge search technologies are essential to the connect-and-develop approach. NineSigma creates a unique database of potential respondents for every client request. "The databases are generated through a variety of searching techniques, some of which are proprietary," says Shauna Brunnett, vice president for operations at NineSigma. "It goes significantly beyond Google, and the techniques are evolving."

For each problem, NineSigma sends out 6,000 bid requests on average and receives 10 to 100 responses. Getting high-quality responses is a key to success, says Richard Swartz, chairman of NineSigma, and that requires sophisticated search algorithms to build just the right mailing list, as well as carefully crafted requests for proposals.

InnoCentive searches its database of 70,000 solvers and sometimes other sources as well, depending on the problem. "We have developed some proprietary algorithms that can identify with a higher probability the folks most likely to participate in a challenge," says InnoCentive's Carroll.

P&G is seeking to identify what it calls "superconnected giants" in the networks. "They are connected through patent literature, they are publishing a lot,

they speak at conferences, maybe they are at the center of a hub as department head at a major research hospital," Huston says. The average researcher knows 2,000 people; the superconnected ones that P&G covets know 10,000 people, he says.

The Final Connection

While companies like P&G are beginning to tap into open-market innovation, the various methods of doing so are not yet well integrated, says Navi Radjou, an analyst at Forrester Research Inc. "The laboratory management systems and discovery tools that scientists use must provide seamless integration with things like InnoCentive," he says. "I think you'll see that happen in the next two or three years."

But Lilly isn't waiting for software vendors to step up to the challenge. It recently launched a project to automate the internal processes surrounding the use of InnoCentive and is also developing interfaces to InnoCentive's own workflow. "We are doing the IT design for an internal portal to these [third-party] systems so that it becomes part of the scientist's natural workflow," Bingham says.

For example, a Lilly scientist today seeking help with a problem would first have to know InnoCentive exists and then find someone at Lilly to explain how it works, fill out approval forms and disclosure forms, contact the relevant person at InnoCentive

and so on, says Bingham. With new workflow automation and interfaces to InnoCentive, that scientist will be able to accomplish the same things with a few mouse clicks. And once the problem definition has been posted by InnoCentive, the Lilly scientist will be able to track its progress online.

Carroll says open-market innovation will dramatically expand in scope over the next five years. "You will see it expand into statistical analysis of business problems, graphics design, advertising and other services industries where this model may apply even more strongly," he says.

Asked about the future of open-market innovation at P&G, Huston says. "The current business model that people are following is not sustainable, and more and more companies will move this way. It's going to become even more important as we face a scientific talent shortage in the U.S.

"This is the future," he says. "People just don't realize it yet." ■ 48854

R&D FROM RUSSIA

By Joe Mauer 48927
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GRID MAY BE the liberal arts of computing. It requires knowledge about many IT disciplines, a flexible management approach and acceptance of new ideas.

But résumé-busting grid-specific skills and accomplishments remain relatively rare. Grid is not widely taught, and IT workers with hands-on experience in this young field are tough to find.

Still, many in IT have the background that underpins grid technology, such as experience with service-oriented architectures, componentized software and distributed computing.

Here's a look at the talents you need to play in grid and how some IT shops are honing them.

Difficult Approach

Grid computing applies the resources of a network to work on a single, complex problem or set of problems. One famous example is the SETI@Home project, the search for extraterrestrial intelligence in which people around the world share their PCs' unused processing cycles to analyze data in an effort to identify signals from outer space.

Implementing a grid takes a variety of skills and an open mind. "The way one approaches the applications [with grid] is very, very different than is traditionally done in high-performance computing environments," says John Hurley, director of grid evaluation and implementation at The Boeing Co. in Chicago. "Grid computing is very different because it requires you to look at things fairly comprehensively."

Grid requires "somebody able to integrate your middleware, your developers, your networking and your vendors, so there has to be a fairly extensive balance" of skills, Hurley adds.

Grid also involves sharing IT resources, which may mean a loss of control for some busi-



Broad IT knowledge, comprehensive experience and an open mind are the keys to harnessing the power of grid computing.
By Patrick Thibodeau

ness units and IT managers. That's "a disconcerting fact for a lot of IT managers; it's not something that they are ready to accept," says Srinivas Koushik, global chief technology officer at Columbus, Ohio-based Nationwide Financial Services Inc. "The pushback from traditional thinking is not something we are underestimating." Grid requires a new mind-set where people can truly tie the network, he adds.

Young Technology

Another challenge facing grid implementers is that standards, applications and middleware are immature. "We still don't have enough standards where we can simply

plug and play with these things we have to glue them together," says Wolfgang Gentzsch, who is leading an effort to build a statewide bioinformatics grid in North Carolina for MCNC Grid Computing & Networking Services, an independent, nonprofit IT research center in Research Triangle Park.

Gentzsch says recruiting people with grid-building skills is a challenge. "You need someone who not only has excellent skills in distributed computing but who ideally has five years' experience" with grid, he says. "And you know grid computing is not five years old," he adds with a laugh. "That's our dilemma."

Grid-specific training is limited, and most IT workers graduated from college without it, says Hurley. "The traditional computing science curriculums just aren't preparing folks to deal with these different kinds of issues," he says.

Today, vendors have most of the grid expertise, so some companies are transferring those skills directly to their IT staffs. That's what Nationwide is doing with its grid vendor, DataSygnapse Inc.

Koushik says he has been focusing on hiring top-notch professionals who understand applications, middleware and security. He has assigned some of those employees to work with the vendor to learn about the grid implementation. For its part, DataSygnapse has established a program to teach grid technology to users.

Tony Bishop, chief business architect at New York-based DataSygnapse, says employees who have a good background for undertaking a grid project understand J2EE, .Net, C++ and how to build componentized applications, as well as systems and application architectures. Systems administration and business analysis skills are also helpful, he says. IT professionals who understand service-oriented architectures and distributed computing and "know those two mesh" should be in good shape to learn grid, says Bishop.

Because grid involves multi-

MAKING THE CASE

Srinivas Koushik, global chief technology officer at Nationwide Financial Services, says the best way to convince those who doubt grid's potential is to show them that it works. Nationwide is running numerically intensive actuarial calculations on 50 desktops instead of on a single server. In doing so, the company has cut computation time on one process from 36 days to 28 hours.

Koushik says this ability to gain additional computing capacity by using existing resources is a critical benefit of grid. "Our competitive advantage, our bread-and-butter business, depends on our ability to look at data and make something of it," he says.

—Patrick Thibodeau

ple systems, broad IT knowledge is also desirable, says Charlie Catlett, chairman of the Global Grid Forum (GGF) in Lemont, Ill., which is developing grid standards and best practices. "We would look for people who have a good understanding of 10 things, instead of deep knowledge on two things," he explains.

Boeing has sent employees to a two-week GGF program that offers a mix of training that appeals to the technical guru as well as the manager who may be more interested in developing policies for sharing and departmentalizing information on a grid, says Catlett.

Looking toward the future, Gentzsch is working with educational institutions in North Carolina to develop a grid training program. He sees a need for more people with grid skills, particularly to build environments that leverage the power of grid by reaching well beyond organizational firewalls. A skills shortage "will hurt the advancement of the real global grids," he says, and that's "where the real challenge is."


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THE FOUNDATION

Grid pioneers say that broad IT knowledge, an open mind and a willingness to try new approaches are critical to success. Skills in the following areas are also excellent preparation for grid:

- Distributed computing
- Service-oriented architectures
- Systems administration
- Systems architectures
- Component architectures
- Business analysis
- Middleware
- J2EE
- .Net
- C++

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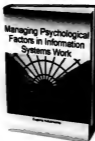
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Q&A

In his new book, *Managing Psychological Factors in Information Systems Work: An Orientation to Emotional Intelligence*, Eugene Kaluzniacky brings together what psychologists know about personality and learning styles with what IT managers know about IT workers. The result, says the instructor in the Department of Applied Computer Science and Administrative Studies at the University of Winnipeg in Canada, is just the first step toward bringing IT to a new level of productivity and humanity. Kaluzniacky told Computerworld's Kathleen Mcelymoot with this vision. He invites feedback and collaboration at e.kaluzniacky@uwinnipeg.ca.

I've seen books about emotional intelligence and about IT. Why combine the two now? Information systems are sociotechnical in nature. There's a technical component and a people-oriented component. You hear a lot of complaints that technical people often build the system right but don't build the right system. More recently, there has been a lot about burnout among IT workers. I did a poll on the Internet, and about 48% of 500 respondents said they were close to burnout. So that could become epidemic in next few years. IT is a unique area in that you have to create, but you have to create on time and be precise and specific and it has to work. So you've got precision, deadline and creativity at the same time. That doesn't happen in many fields. Also, because technology has proliferated, more is possible and more is expected of IT professionals — sometimes to the point of not being realistic. So people need more tools than they currently have to work in this profession.



How can an understanding of emotional factors help an IT manager work more effectively? A true story of how personality can play in systems development. In a financial services company, two ladies showed up the same on three dimensions of the Myers-Briggs personality inventory and different on the fourth, which measured how much structure they required to be comfortable. I asked them what in the course of their work stressed them the most. The structured person said she became very stressed if she had more than one thing on her desk at once. The person who required less structure said she was really stressed if there was only one thing to work on; she had to have several. So if a person is wired in a certain way and you're having him or her do things that stifle them, you're underutilizing them, and they're burning out because you don't understand their natural style. If a manager understood the personality, thinking styles, operating styles of people, it's incredible how much energy could be freed up.

If there were one thing you'd like readers to take away from this book, what would it be?

I think there's a lot of empowerment to be gained from awareness of the psychological factors in the course of IT work.

I wanted to state a vision and bring IT to a new level. I would love to see this book as a first step. I've already created a Web page on wellness in IT (<http://www.wellness.net>) and I will build a separate component for comments and questions about the book. That's a start. There will have to be volunteers for the next stage [of research], and I'm looking for them. © 48891

BOOK EXCERPT

Tying Styles to Tasks

Not All Individuals Learn in the Same Way

■ **DIVERGERS'** greatest strength is in imaginative ability and awareness of meanings and values. They view a concrete situation from many perspectives and generate alternative ideas as in "brainstorming."

■ **ASSIMILATORS'** greatest strength is inductive reasoning and the ability to create theoretical models. Individuals with this style assimilate disparate observations into an integrated explanation. They focus more on abstract concepts than on people and judge ideas by sound logic and precision rather than practicality.

■ **CONVERGERS'** greatest strength lies in problem solving and practical application of ideas. People with this style do best in situations where there is one preferred answer, to which they "converge." Usually, convergers prefer dealing with technical tasks.

■ **ACCOMMODATORS'** greatest strength lies in doing things. They seek openness and take risks. Where theories don't fit the facts, accommodators will likely discard the theory. They adapt themselves to changing circumstances. People with an accommodating style solve problems in an intuitive, trial-and-error way.

Learning Styles and IT Tasks

Even at a glance, it's not too difficult to make preliminary assessments about relative strengths of different styles in various IT tasks.

■ **PROTOTYPING, USER INTERFACE DEVELOPMENT:** The Diverger can use imagination, assess alternatives and be sensitive to users. The Accommodator can focus on the practicality and usefulness of the interfaces.

■ **DATA/PROCESS/OBJECT MODELING:** This is the real domain of the Assimilator, who goes from observation to abstraction (modeling).

■ **IMPLEMENTATION/TESTING/QUALITY CONTROL:** The Converger takes direct models and experiments by developing and testing code.

■ **SYSTEM IMPLEMENTATION:** The Accommodator is the star and can be flexible toward sudden changes. His style can be very useful here. The Converger may also fit, preferring a specific outcome after active experimentation.

■ **TELECOMMUNICATIONS:** In network design, the Converger could be completely assisted by an Assimilator, especially in complex, wide-area situations.

■ **MANAGING PROGRESS/RE-CONVERGENCE:** In the earlier stages of modeling, alternative ways for an organization to operate can be proposed by Assimilation, possibly aided by Divergers. In the latter stages of BPR, when the new system is implemented and new processes must be taught and initiated, Convergers and Accommodators can rise to the occasion.

■ **WEB SITE DESIGN:** The parts that users see, particularly if involving multimedia, would be a natural for Divergers, whereas the technical underpinnings could involve Convergers, possibly assisted by Accommodators.

■ **HELP DESKING:** This area belongs to the Accommodator style, which prides itself in listening to changing circumstances (" troubleshooting"). © 48892

Adapted with permission from *Managing Psychological Factors in Information Systems Work: An Orientation to Emotional Intelligence*, by Eugene Kaluzniacky (Information Systems Publishing, 2004).

Emotional INTELLIGENCE

Eugene Kaluzniacky is on a mission to beat IT burnout and boost IT energy through a better understanding of what makes technologists tick.

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Career Watch

It's All About The Money

For experienced IT pros, that is. By 2006/2007, IT salaries will again escalate as the economy improves, putting labor costs at 55% to 60% or more of the IT budget, according to Meta Group Inc. As the economy continues to improve through the end of this year and into 2005, key IT employees will start scanning the horizon for better employment opportunities, Meta predicts. To prevent the exodus of top employees, CIOs should pay closer attention to

human capital management programs, including management development, employee wellness/morale, and recruitment and retention programs, as well as performance-based incentives. CIOs should work closely with human resources staff and line-of-business managers to address workforce hiring trends and projected IT staffing requirements, Meta says. They should also focus on selection of proper outsourcing strategies and try to keep annual employee turnover rates in the range of 4% to 6%.

- Julia King

Numbers Watch

FOURTH-QUARTER IT HIRING FORECAST

- 9% of all CIOs will expand IT staff
- 3% of all CIOs will decrease IT staff
- 80% report they need Microsoft Windows (NT/2000/XP) administration skills
- 51% need Cisco network administration and Check Point firewall administration skills

WHO'S READING YOUR E-MAIL?

- A Companies that hire staff to monitor outbound e-mail content
- B Companies that perform regular audits of outbound email

	A	B	INDUSTRY
	22%	24%	Goods manufacturing
	25%	30%	Retail/wholesale
	45.5%	39%	Business services
			transportation/construction/engineering
	39%	44%	Finance and insurance
	29%	36%	Public service/government
	40%	40%	Other (includes media, advertising, telecom and utilities)

Joe Rich



TITLE: Executive vice president

COMPANY: Clark Consulting, Marlboro, Mass.

WHAT HE DOES: Having just surveyed 37 U.S.

IT companies about their college recruiting plans, Rich is lukewarm at best in his opinion about new IT graduates' job prospects in the U.S. high-tech sector. The main reason: Graduate hiring by U.S. high-tech companies this year increased by a mere 1.5% over 2003. What's more, although the total number of new college graduates has increased, most U.S. high-tech companies hired fewer college graduates this year than in 2003.

What is the near-term IT employment forecast for recent university graduates? Hiring is modestly up but remains relatively low. In 2004 we saw only about 3,600 or so college grads in a sample of 37 companies. The interesting thing is that among the com-

panies that increased rather than decreased staff, the hiring was significant in that they increased college hiring by 87%. These companies tend to be in networking and telecommunications and software and services. The companies less likely to be hiring are in the semiconductor and hardware space.

What kind of degrees do new hires have?

The strongest growth in college hiring is among computer science degrees with an IS emphasis. Overall, the number of hires for bachelor's degrees increased 68%. There was a 140% increase for master's degrees and a 100% increase for Ph.D.s.

How does today's college hiring compare with the pre-dot-com-bust days? In 1999 and 2000, we were seeing closer to 10,000 new college graduates hired in a year.

Given the current employment picture, would you encourage your own children to pursue a degree and/or a career in IT? IT is a less secure degree and career than it was 10 years ago. One reason is that we now have a hole in the bucket. When we do hire employees, they can come from places other than the U.S. - China, for example. As demand increases among U.S. technology firms, for the first time they have the option to go and get those employees somewhere other than the U.S. If we are advising youngsters about what to do about their degrees, I'd tell them to follow their passion. **49124**

Keep Your Politics To Yourself

That's the advice of Liz Ryan, a workplace expert and founder and leader of the WorldWIT, an online discussion forum for women in business and technology (www.WorldWIT.org). "Over the last six to eight months, the country has split like the San Andreas fault. Now, with this hot, hot election coming up, talking about politics at work can negatively impact your career," Ryan says.

"Your boss or someone else in power may hold a different opinion than yours, so the best thing is to stay out of the political fray and keep the discussion incoherent. They don't need to know if you're a Kerry or Bush supporter. It won't help you professionally to tell them," Ryan says. Should your manager or someone else at work press you on the issue, there are gracious ways to wriggle out of the conversation, she adds. Ryan's personal fa-

vorite is to agree that the political rhetoric this year indeed seems more heated than ever before. Then say, "But I've made a commitment not to get derailed by the political situation and let it distract me from my work or anything else."

Say Bye-Bye

Over the next four years, more than 140,000 domestic call center jobs - and the IT infrastructure, network and com-

puter support jobs that go with them - will disappear as companies move to cut costs by outsourcing the work to Canada and other countries with lower labor costs, according to a study released last month by New York-based research Datamonitor PLC. Datamonitor predicts that the number of U.S. call centers will decline by 6% from 50,800 today to 47,500 in 2008. At the same time, 600 new call centers will set up shop in Canada, creating 83,000 call center agent jobs north of the border.

IN BRIEF

Career Watch

It's All About The Money

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—Julia King

Numbers Watch

FOURTH-QUARTER IT HIRING FORECAST

Base: 1,490 U.S. CIOs at companies with more than 100 employees
SOURCE: ROBERT HALF TECHNOLOGY RESEARCH
INTERVIEW DATES: AUGUST 2004

WHO'S READING YOUR E-MAIL?

- A = Companies that hire staff to monitor outbound e-mail content
- B = Companies that perform regular audits of outbound e-mail

A	B	INDUSTRY
22%	24%	Goods manufacturing
25%	30%	Retail/wholesale
45%	36%	Business services, transportation, construction, engineering
39%	44%	Finance and insurance
29%	36%	Public service/nonprofit
40%	40%	Other (includes media, entertainment, telecom and utilities)

Base: 140 companies with more than 1,000 employees
SOURCE: METAGROUP INC. RESEARCH
RESEARCH AND DATA PROVIDED BY: CARRIETHAN GROUP
CITY: JUNE 2004



Q How many IT graduates are entering the workforce each year?

A According to the U.S. Bureau of Labor Statistics, about 370,000 IT graduates enter the workforce each year. This number is expected to increase to about 400,000 by 2010.

Q What is the most common IT degree?

A The most common IT degree is a bachelor's degree in computer science. Other common degrees include computer engineering, information systems, and software engineering.

Q What is the average starting salary for an IT graduate?

A The average starting salary for an IT graduate is about \$45,000 per year. This number is expected to increase to about \$50,000 by 2010.

What is the near-term IT employment forecast for recent university graduates?
Hiring is modestly up but remains relatively low. In 2004, we saw only about 3,600 or so college hires in a sample of 37 companies. The interesting thing is that among the com-

panies that increased rather than decreased staff, the hiring was significant in that they increased college hiring by 89%. Those companies tend to be in networking and telecommunications and software and services. The companies less likely to be hiring are in the semiconductor and hardware space.

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IN BRIEF



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 Web site: www.kimworld.com

BART PERKINS

Your Other IT Budget

ALL IS COMING, and in most corporations, that's the silly season of budget wars. Getting your budget approved requires clear communication and mutual understanding. Unfortunately, the budgeting process is organized around financial practices (capital and operating expenditures), rather than the way IT operates. To communicate the needs of your IT organization more effectively, forget about capital and operating expenses for a while and consider your budget from the perspective of discretionary and nondiscretionary spending.

Nondiscretionary budget.

This funds the operation and maintenance of existing systems and infrastructure. It includes the cost of running and maintaining software applications as well as production services (such as e-mail desktop support for office workers). This is analogous to operating a car after you buy it: In addition to buying gasoline, you need to change the oil, rotate the tires, replace the brake pads and so on. Your nondiscretionary budget is more than just your operating budget. It includes both capital and expense items. For example, capitalized hardware and license fees required for infrastructure support are nondiscretionary items.

The CIO has ultimate responsibility for the nondiscretionary budget and is held accountable for both explaining and minimizing it. To justify its size, you need to know how your unit costs compare with industry norms, such as per seat, per PC installation or per help desk call. Research your costs before you have to justify them. If they are below industry norms, use this information to deflect budget attacks. If your costs are above industry norms, get them down in the following ways:

- Simplify your architecture to re-



duce infrastructure support costs, and use commodity products wherever possible. It's easier and cheaper to support less diversity.

- Comparison-shop for this year's deals, especially for application packages and telecommunications.

- Manage your vendors and their costs closely.

- Consider going offshore when it won't compromise quality.

Discretionary budget. This budget is used to fund development of new functionality and replace existing systems or parts of the infrastructure. Discretionary projects usually enable a company to do at least one of the following:

- Provide financial benefits, such as increased sales or reduced costs. The benefits of a project are usually expressed in terms of financial return. These days, most corporations will fund only projects that provide substantial financial benefits.

- Meet regulatory requirements.
- Provide significant intangible benefits. For example, a hospital might fund a system that enables it to deliver a higher quality of care, regardless of financial return.

Your discretionary budget is not the same as your capital budget. IRS regulations on software capitalization re-

quire that certain parts of the software development process be capitalized, while others are no longer eligible for capitalization. In contrast, the discretionary budget contains all costs related to specific projects, including both capital and expense items.

For discretionary projects, the path to budget victory is an effective business case. Historically, discretionary projects have depended on the CIO to justify them, but this responsibility is largely misplaced.

The business executive who is pounding on your door demanding a new application should be responsible for developing the business case and accurately quantifying the project's business benefits. (The purported benefits should be included in the business head's performance plan to ensure realistic estimates.) That executive is best qualified to defend the project's importance and should lead the charge through the budget battles. In extreme cases, he may offer to contribute dollars from his own budget to fund a specific program rather than have it cut.

The IT organization will still be responsible for providing accurate estimates of the project's IT costs. In order for the project to survive the budget wars, the CIO and the business executive need to jointly prepare and jointly deliver a rigorous and comprehensive business case.

This year, to get maximum leverage for the IT budget war, try reexamining your budget from the perspective of discretionary and nondiscretionary categories. You'll still have to restate your budget into operating and capital expenses for the finance department, but you'll be far better prepared to communicate the needs of your IT organization. Your projects will have a better chance of surviving the budget wars, and this time you won't be on the front line alone. **40805**

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